



KONICA MINOLTA

LASER IMAGER

# DRYPRO

## MODEL 873

## Operation Manual



Manufacturer:

**KONICA MINOLTA, INC.**

1 Sakura-machi, Hino-shi, Tokyo, 191-8511, Japan

**EN**

**13**



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# Introduction

Thank you for purchasing Laser Imager DRYPRO MODEL 873 (hereinafter referred to as “DRYPRO 873”).

DRYPRO 873 is a totally dry processing laser imager. This product is easy to use and environmentally friendly while maintaining sophisticated features and high image quality.

This Operation Manual provides instructions for use and operation procedures to ensure that users of the DRYPRO 873 become thoroughly familiar with the product and handle it safely. This manual should be kept in a handy place for quick reference. If you should lose this manual, contact Konica Minolta technical representatives.

## Classifications

This product is classified as below.

### **Classification based on the kind of protection for electric shock.**

A power supply device for commercial use outside.

Class I device.

### **Classification based on the degree of protection for water intrusion which may lead to danger.**

Ordinary Device.

(Enclosed device without protection against ingress of water. IPX0)

This product is not suitable for use in an environment where an inflammable anesthesia which is mixed with air or an inflammable anesthesia which is mixed with oxygen or nitrogen monoxide is present.

### **Classification based on the operation mode.**

Continuous operation.

### **Classification based on the category of Laser Product.**

Class 1 Laser product. (IEC 60825-1:2007)

## Summary of usability specifications (for IEC/EN 60601-1-6 & 62366)

- 1) Medical purposes
  - Reading and provision of diagnostic images for diagnosis of disease and injury.
- 2) Patient groups
  - No patients groups that operate or touch the device.
  - No specification of patient groups of read X-ray images.
- 3) Parts of body or organizations to which the device is mounted or that interact with the device.
  - No appropriate points. (Device does not come in contact with the patient.)
- 4) Unit operator
  - Unit operator must be an adult technician who has received education and training in handling the device (physician, radiologist, etc.).
- 5) Functional description, including physical principles
  - The product prints out on film the image data that are received, via the in-hospital network, from diagnostic imaging devices: After receiving image data, the product automatically transports the films from the supply unit to the exposure unit, where latent images are formed by using laser beam, and then ejects the images developed in the heat process unit.

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- The erasure, corruption, or unwanted disclosure of data stored within this device, including personal and sensitive patient information.
  - Malfunction of the device or accidents occurring as a result of the malfunction of the device.
  - Infection of other products upon connection with the device, or damages arising therefrom.
- (12) Whenever you use this service, you are required to take some security or safety measures for the following items related to the service:
- Please understand that Konica Minolta, Inc. is unable to assume liability for certain events, such as malfunctions or incidents of information leakage resulting from such events.
- Client and network equipment managed by our facility
  - The network and ISP in our facility used for connection with this service
  - Your equipment to be connected to the same network as that of this service
- (13) When this device is used, various user and patient data stored within the device and external storage devices must be adequately managed under the full responsibility of the user. Konica Minolta, Inc. is unable to assume any liability relating to damages arising due to leakage of various data at the time of disposal.

## For EEA (European Economic Area), Swiss and Turkey

- Intended purpose:  
A device is intended for use in the acquisition and process of radiographic images of human anatomy. It is intended to replace radiographic film/screen system in general-purpose diagnostic procedures.
- Intended use:  
This device is intended to use for printing image data to provide diagnosis images for diagnosis of disease and injury.
- Intended Users:  
It is used by highly trained specialists, such as medical physicians or radiologic technologists working in diagnostic imaging.
- Intended patient population:  
No limitation.
- Intended patient medical condition:  
No limitation for medical condition.
- Intended clinical application:  
No limitation for body region.

## EU member states only



### CAUTION

- **Any serious incidents or side-effects that could have occurred in relation to the device should be reported to your Konica Minolta service representative and the EU competent authorities.**

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# **Chapter 1**

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## **Safety Warnings & Precautions**

# 1.1 Alert Symbol Marks






Safety alert symbols alert the user to matters and/or operations potentially hazardous to the user and other people.

Read these messages and follow instructions carefully.





Be sure to read all instructions and safety standards and become thoroughly familiar with the product before starting operation.

## Description of Graphic Symbols



- Symbols indicating that care (including danger and warnings) should be taken

				
General Precautions	Danger of Fire	Danger of Electrical Shocks	High Temperature Warning	Danger of Laser







- Symbols indicating prohibited acts



			
Prohibited	Do not disassemble	Do not touch with a wet hand	Do not expose to moisture

- Symbols indicating compulsory or required acts

	
Ground	Remove plug from outlet

- Other symbols

					
AC Voltage (Power Supply)	Power Supply Circuit Breaker OFF	Power Supply Circuit Breaker ON	Operation Switch	Manufacturer	Production Date

	
Indicates that this device is a medical device.	This symbol indicates that this device is in conformity with the Regulation (EU) 2017/745.

\* If the contents of this page become illegible, please purchase a new manual (a fee is required.)

## 1.2 Warning Notice (Signal Words)

Signal words provide an indication of the level of danger concealed within the product.

This manual uses three different signal words depending on the probability and severity of injury or damage as explained below.

- **DANGER**

Indicates acute hazards that will result in death or serious injuries if not avoided.

- **WARNING**

Indicates dangers that may result in death or serious injuries if not avoided.

- **CAUTION**

Indicates dangers that may result in medium-level wounds or minor injuries if not avoided. It is also used to indicate anticipation of damages to property, or of losing, changing, or suspending entered data.

		Probability of damage	
		High	Low
Bodily injury (or damage to property)	Death or serious injury (serious damage)	DANGER	WARNING
	Medium-level wound or minor injury (minor damage)	WARNING or CAUTION	CAUTION
Damage to property only		CAUTION	

## 1.3 Warning Labels

Various warning labels are attached to DRYPRO 873 shown below. This is to remind our customers of the possible dangers that can occur when using the machine.

### 1.3.1 Information on Warning Labels

#### Laser warning label



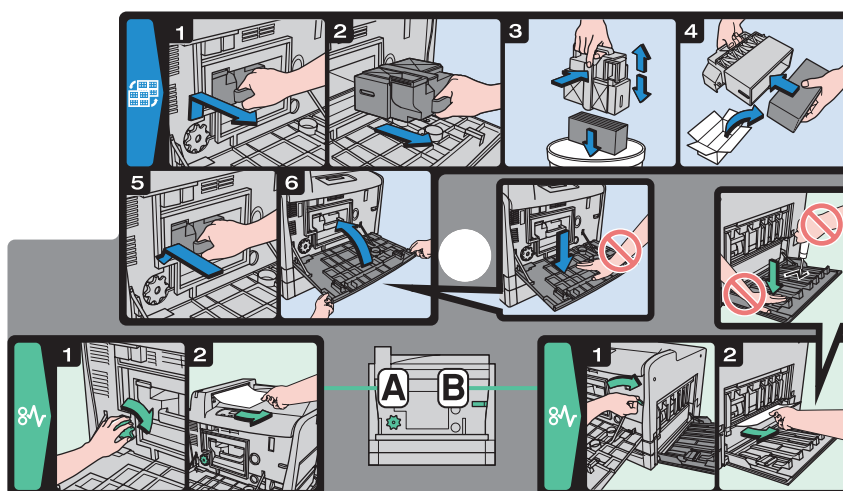
#### Laser Power Label



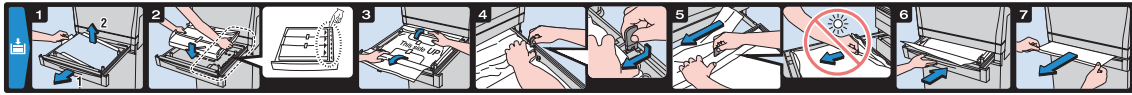
#### Class 1 Laser product label



#### Change deodorant filter/Clear jam label



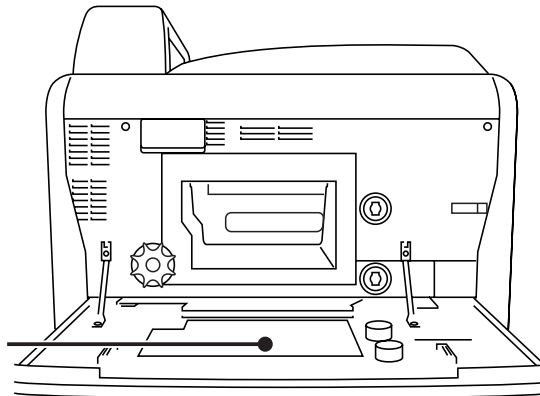
## Load film label/Film package opening warning label



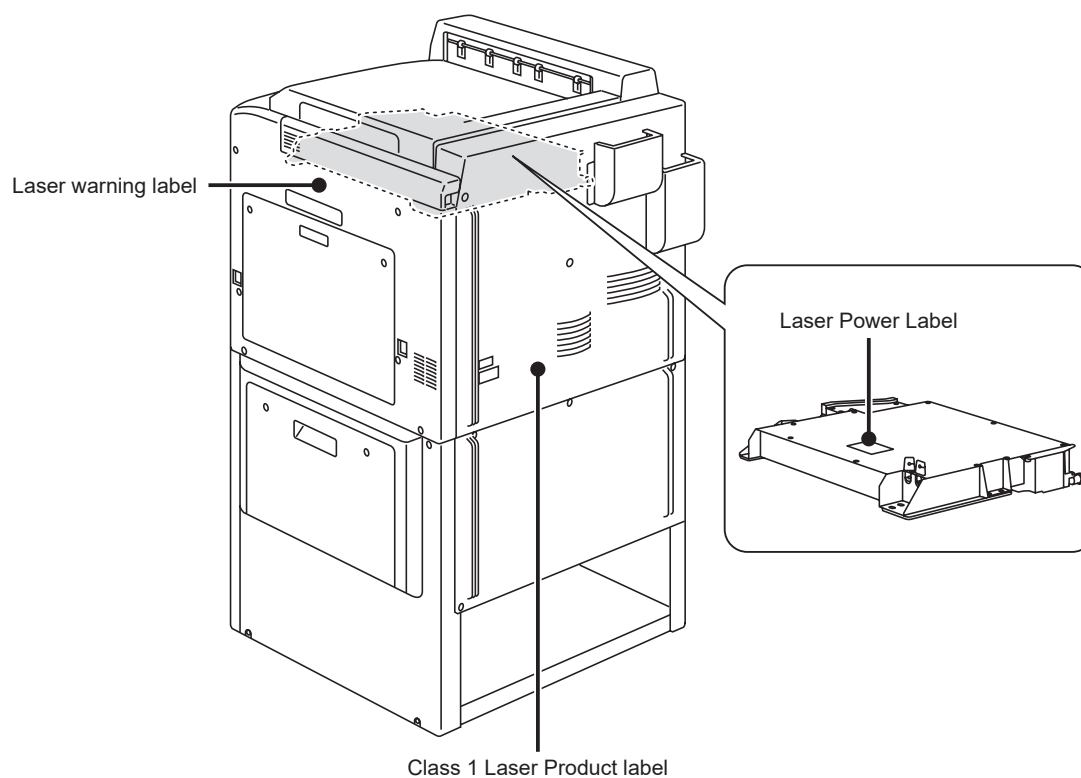
## 1.3.2 Locations of Warning Labels

### Internal View

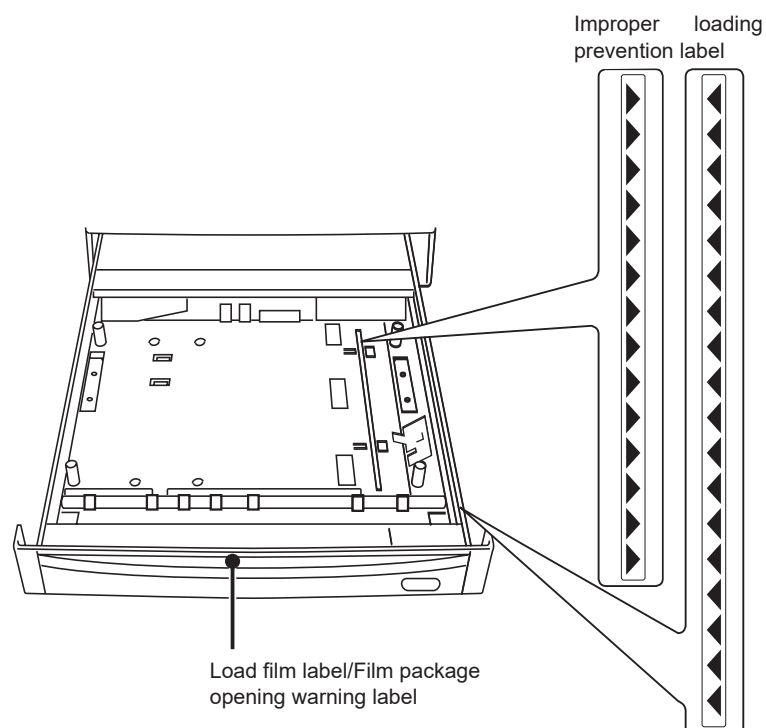
Change deodorant filter/  
Clear jam label



## Rear and Right Side View



## Supply Tray








## 1.4 Safety Precautions

Read all safety precautions thoroughly before using the product.

Be sure to observe the safety precautions described in this section.

### 1.4.1 Precautions when Installing

#### WARNING

	<ul style="list-style-type: none"> <li>• <b>The product must not be modified.</b> Modifications to the product could cause failure, electrical shock or fire.</li> </ul>
	<ul style="list-style-type: none"> <li>• <b>Have the product installed by the distributor where you purchased the product or Konica Minolta technical representatives.</b> Improper installation performed by yourself could cause an electric shock or fire.</li> </ul>
	<ul style="list-style-type: none"> <li>• <b>Ground.</b> Do not ground to gas line, water supply pipe, lightening rod, or telephone. To avoid the risk of electric shock, this equipment must only be connected to a supply mains with protective earth.</li> </ul>
	<ul style="list-style-type: none"> <li>• <b>Electrical work (including grounding and communication cable wiring work) must be performed in compliance with applicable technical standards for electrical installation.</b> Improper work could cause an electric shock or failure.</li> </ul>
	<ul style="list-style-type: none"> <li>• <b>Use power supply with sufficient capacity to meet power requirements and specifications.</b> If you use power supply that does not meet specifications or that does not supply sufficient current, it could cause overheating of electrical components or fire.</li> </ul>

















### 1.4.2 Precautions for Relocating, Storing Temporarily, and Repairing

#### CAUTION

<ul style="list-style-type: none"> <li>• <b>Use a 15A outlet independently.</b> Do not share the outlet with other equipment. Otherwise it can cause the circuit breaker to trip.</li> </ul>
<ul style="list-style-type: none"> <li>• <b>If unusual noise, odor, or smoke coming from this product is detected, immediately stop operation down and unplug it. Then, contact the distributor where you purchased the product or Konica Minolta technical representatives.</b> If you continue to operate it with abnormal condition left as it is, it could cause failure, electric shocks, or fire.</li> </ul>
<ul style="list-style-type: none"> <li>• <b>For handling of errors not described in this document, contact Konica Minolta technical representatives.</b> Improper repair made by yourself could cause an electric shock or fire.</li> </ul>
<ul style="list-style-type: none"> <li>• <b>Before relocating, temporarily storing or reinstalling the product, the distributor where you purchased the product or Konica Minolta technical representatives.</b> Improper relocation and reinstallation performed by yourself could cause electrical shocks or fire.</li> </ul>
<ul style="list-style-type: none"> <li>• <b>Do not remove the lithium batteries.</b> Lithium batteries may explode if exposed to fire or water.</li> </ul>

### 1.4.3 Precautions for Use

#### WARNING

	<ul style="list-style-type: none"> <li>• <b>Do not open or close the cover, adjust or operate it for purposes other than those described in this document.</b> If you accidentally come into contact with the hot part or high voltage points contained in the product, it could cause a burn or an electric shock.</li> </ul>
	<ul style="list-style-type: none"> <li>• <b>When you change filters or clear a film jam in the ejection and transport unit, follow the steps provided in this document.</b> Failure to do so could cause a burn.</li> </ul>
	<ul style="list-style-type: none"> <li>• <b>Be sure to push in each plug firmly.</b> If you use the product with dust settled or the plug not pushed in firmly, it could cause electrical shocks or fire.</li> </ul>
	<ul style="list-style-type: none"> <li>• <b>Always use the power cable that comes with this product. Avoid using extension cord or sharing the power cable with other equipment.</b> Furthermore, the supplied power cable is designed specifically for use with this equipment. <b>Do not use it with other equipment.</b> Failure to do so could cause an electrical shock, heat generation or fire.</li> </ul>
	<ul style="list-style-type: none"> <li>• <b>Be careful not to damage the power cable by getting your foot caught in it.</b> If you continue to use the damaged cable, it could cause an electric shock or fire.</li> </ul>
	<ul style="list-style-type: none"> <li>• <b>Do not block the air intake or outlet.</b> Failure to do so could cause fault.</li> </ul>
	<ul style="list-style-type: none"> <li>• <b>Do not operate or shut down this product by removing or inserting the power cord.</b> Failure to observe this could cause an electric shock or fault.</li> </ul>
	<ul style="list-style-type: none"> <li>• <b>If there is the risk of a lightning strike, cause the machine to stop operation and unplug the power cord.</b> It could cause failure, depending on the severity of lightning.</li> </ul>
	<ul style="list-style-type: none"> <li>• <b>This product is intended for use for printing image data. Do not use for other purposes.</b> Failure to observe this could cause fault.</li> </ul>
	<ul style="list-style-type: none"> <li>• <b>Do not operate switches with a wet hand.</b> Failure to observe this could cause an electric shock.</li> </ul>
	<ul style="list-style-type: none"> <li>• <b>When you unplug the power cord, do not pull it out.</b> This could cause a break in a cord, resulting in overheating or fire.</li> </ul>
	<ul style="list-style-type: none"> <li>• <b>Avoid exposure to water and moisture, for example, wipe the product with a damp cloth or place a vessel filled with water such as a vase.</b> Failure to observe this could result in an electric shock caused by ground leakage.</li> </ul>
	<ul style="list-style-type: none"> <li>• <b>Before cleaning the product, be sure to stop operation and unplug the power cord from the wall outlet or turn the circuit breaker off.</b> Since the fan is rotating at high speed inside, failure to observe this could result in injury or failure.</li> </ul>
	<ul style="list-style-type: none"> <li>• <b>When this product is not used for a long period of time, unplug the power cord from the wall outlet.</b> Failure to do so could cause heat generation or fire due to a thick layer of dust accumulated.</li> </ul>
	<ul style="list-style-type: none"> <li>• <b>Do not place obstacles around the outlet.</b> There are times when it is difficult to pull out the power plug in case of emergency.</li> </ul>
	<ul style="list-style-type: none"> <li>• <b>Should the product fail, contact Konica Minolta technical representatives listed on the back page.</b> Never continue to use the failed product, as it poses a danger. This product uses a laser. Avoid eye or skin exposure to direct laser, as it could cause eye or skin injury. Also, this product contains high voltage points inside. Be careful not to come into contact with them, as it can lead to an electric shock.</li> </ul>

## CAUTION

- **Maintenance other than “Maintenance and Items to be Checked by Users” described in this operation manual requires expertise. Contact Konica Minolta technical representatives.**  
Improper maintenance performed by yourself could cause an electric shock or fire.
- **If an odor from this product bothers you, install a ventilation fan in the room where the product is installed.**  
(Determine the fan size and capacity, according to the structure of the room.)  
The amount of chemicals emitted during operation is below permissible limit.
- **Do not sway the main unit during operation.**  
This could cause image deterioration of print.
- **Use of control or adjustments or performance of procedure other than those specified herein may result in hazardous radiation exposure.**
- **Do not use mobile phones or pocket pagers in the vicinity of the DRYPRO MODEL 873.**  
Use of mobile phones or pocket pagers near the DRYPRO MODEL 873 can cause errors in operation due to electromagnetic wave interference: such devices should be switched off in the vicinity of the unit.  
Device generates electromagnetic wave such as microwave therapy equipment also may cause errors in operation or images.  
Contact Konica Minolta technical representatives.



- **In order to obtain high-quality images, be sure to perform regular maintenance operations. Failing to do so causes dirt and foreign matter to be deposited on the film, which may result in hard-to-interpret radiographic images. In such cases, clean the inside of the supply tray when replacing film. When you use the mammography media expansion tray (optional), clean the cleaning roller as well.**



“5.3.2 Cleaning Supply Tray” (page 107)

“3.6.7 Roller Cleaning” (page 61)

### 1.4.4 Requirements for Installation Location

## CAUTION

- **For installation location of this product, be sure to meet the following requirements.**  
Plan a layout to provide a smooth workflow by installing this machine in Department of Radiotherapy.
- 1) Place where the machine is not exposed to water.
  - 2) Place where the temperature and humidity do not exceed the specified environmental condition.
  - 3) Place where the machine is not exposed to direct sunlight.
  - 4) A flat, level location.
  - 5) Place where the machine is not subject to vibration and shock.
  - 6) Place where the machine is not exposed to a hazardous atmosphere containing chemicals, gases, dust, salt or sulphur.
  - 7) Install on a sturdy floor that supports the weight of this machine (Main unit: 152 kg; Expansion tray (optional): 15 kg; Mammography media expansion tray (optional): 17 kg; Sorter (optional): 18 kg).

## 1.4.5 Precautions for Disposal



### CAUTION

- Have DRYPRO 873 main units (including lithium button batteries), supplied accessories, accessories sold separately, consumables and media disposed of by authorized industrial waste disposal firm.

For waste disposal method, comply with applicable ordinances and regulations of the local government.



This symbol means: Do not dispose of this product together with your household waste!

Please refer to the information of your local community or contact our dealers regarding the proper handling of end-of-life electric and electronic equipments.

Recycling of this product will help to conserve natural resources and prevent potential negative consequences for the environment and human health caused by inappropriate waste handling.

#### CALIFORNIA, USA ONLY

This product contains a CR Lithium Battery which contains

Perchlorate Material - special handling may apply.

See

[www.dtsc.ca.gov/hazardouswaste/perchlorate](http://www.dtsc.ca.gov/hazardouswaste/perchlorate)

## 1.4.6 Precautions Following Requirements of Laws and Regulations



### CAUTION

- **Caution as to laser control**

To prevent danger, make sure that only service engineers who received proper formal training will remove the exterior cover or touch the inside of the equipment.

## DRYPRO 873 Laser Unit Specifications

Item	Specifications
Wavelength	784nm
Maximum output	280mW

### (1) EMC Statement

This device has been tested and found to comply with the limits for medical devices in IEC 60601-1-2: 2007 or IEC 60601-1-2: 2014. These limits are designed to provide reasonable protection against harmful interference in a typical medical installation. DRYPRO 873 generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to other devices in the vicinity. However, there is no guarantee that interference will not occur in a particular installation. If DRYPRO 873 does cause harmful interference to other devices, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving device.
- Increase the separation between the equipment.
- Connect the equipment into an outlet on a circuit different from that to which the other device(s) are connected.
- Consult the manufacturer or field service technician for help.

### ●WARNING

- Do not use mobile RF communication devices such as mobile phones or pocket pagers in the vicinity of this device. Use of such RF devices near this device can cause errors in operation due to electromagnetic wave interference. When using a mobile RF device, ensure that the distance between the RF device in use and this device is at least 30 cm (12 inches).
- The use of accessories, transducers and cables other than those sold by Konica Minolta, Inc. as internal components, may result in increased emissions or decreased electromagnetic immunity of this device, possibly causing malfunction.
- Do not use this device adjacent to or stacked with other devices. If adjacent or stacked use is necessary, confirm normal operation in the configuration in which this device will be used.

### ●Supplementary information regarding IEC 60601-1-2: 2007 and IEC 60601-1-2: 2014

- (1) Take precautions against this device especially regarding EMC. Install and put into service according to the electromagnetic compatibility (EMC) information provided in the manual (Table 1 - Table 5).
- (2) This device is suitable for use in medical institutions such as hospitals and clinics. However, this device is not suitable for use in environments with high degree of electromagnetic wave interference (such as near an electric operation device in use for output, or near a high frequency treatment device).
- (3) Cable List-  
AC Power Cable (3m)

Table 1 (support for IEC 60601-1-2:2007 and IEC 60601-1-2:2014)

Guidance and manufacturer's declaration - electromagnetic emissions		
The DRYPRO 873 is intended for use in the electromagnetic environment specified below. The customer or the user of the DRYPRO 873 should assure that it is used in such an environment.		
Emissions test	Compliance	Electromagnetic environment - guidance
RF emissions CISPR 11	Group 1	The DRYPRO 873 uses RF energy only for its internal function. Therefore, its RF emissions are very low and are not likely to cause any interference in nearby electronic equipment.
RF emissions CISPR 11	Class B	The DRYPRO 873 is suitable for use in all establishments other than domestic and those directly connected to the public low-voltage power supply network that supplies buildings used for domestic purposes.
Harmonic emissions IEC 61000-3-2	Class A	
Voltage fluctuations/flicker IEC 61000-3-3	Applicable	

Table 2 (support for IEC 60601-1-2:2007)

Guidance and manufacturer's declaration - electromagnetic immunity			
The DRYPRO 873 is intended for use in the electromagnetic environment specified below. The customer or the user of the DRYPRO 873 should assure that it is used in such an environment.			
Immunity test	IEC 60601 test level	Compliance level	Electromagnetic environment - guidance
Electrostatic discharge (ESD) IEC 61000-4-2	±6kV contact	±6kV contact	Floors should be wood, concrete or ceramic tile. If floors are covered with synthetic material, the relative humidity should be at least 30%. Main power quality should be that of a typical commercial or hospital environment.
	±8kV air	±8kV air	
Electrical fast transient/burst IEC 61000-4-4	±2kV for power supply lines	±2kV for power supply lines	Main power quality should be that of a typical commercial or hospital environment.
	±1kV for input/output lines	±1kV for input/output lines	
Surge IEC 61000-4-5	±1kV differential mode	±1kV differential mode	
	±2kV common mode	±2kV common mode	
Voltage dips, short interruptions and voltage variations on power supply input lines IEC 61000-4-11	<5% $U_T$ (>95% dip in $U_T$ ) for 0.5 cycle	<5% $U_T$ (>95% dip in $U_T$ ) for 0.5 cycle	Main power quality should be that of a typical commercial or hospital environment. If the user of the DRYPRO 873 requires continued operation during main power interruptions, it is recommended that the DRYPRO 873 be powered from an uninterruptible power supply or a battery.
	40% $U_T$ (60% dip in $U_T$ ) for 5 cycles	40% $U_T$ (60% dip in $U_T$ ) for 5 cycles	
	70% $U_T$ (30% dip in $U_T$ ) for 25 cycles	70% $U_T$ (30% dip in $U_T$ ) for 25 cycles	
	<5% $U_T$ (<95% dip in $U_T$ ) for 5 sec	<5% $U_T$ (<95% dip in $U_T$ ) for 5 sec	
Power frequency (50/60Hz) magnetic field IEC 61000-4-8	3A/m	3A/m	Power frequency magnetic fields should be at levels characteristic of a typical location in a typical commercial or hospital environment.
[NOTE] $U_T$ is the a.c. mains voltage prior to application of the test level.			

Table 3 (support for IEC 60601-1-2:2007)


Guidance and manufacturer's declaration - electromagnetic immunity			
The DRYPRO 873 is intended for use in the electromagnetic environment specified below. The customer or the user or the DRYPRO 873 should assure that it is used in such an environment.			
Immunity test	IEC 60601 test level	Compliance level	Electromagnetic environment - guidance
Conducted RF IEC 61000-4-6	3V/mf 150 kHz to 80 MHz	[3]V	Portable and mobile RF communications equipment should be used no closer to any part of the DRYPRO 873, including cables, than the recommended separation distance calculated from the equation applicable to the frequency of the transmitter. Recommended separation distance $d = [1.2] \sqrt{P}$
Radiated RF IEC 61000-4-3	3V/m 80 MHz to 2.5 GHz	[3]V/m	$d = [1.2] \sqrt{P}$ 80 MHz to 800 MHz $d = [2.3] \sqrt{P}$ 800 MHz to 2.5 GHz  where P is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer and d is the recommended separation distance in meters (m)  Field strengths from fixed RF transmitters, as determined by an electromagnetic site survey, <sup>a</sup> should be less than the compliance level in each frequency range. <sup>b</sup>  Interference may occur in the vicinity of equipment marked with the following symbol: 
[NOTE] At 80 MHz and 800 MHz, the higher frequency range applies.			
[NOTE] These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.			
a Field strengths from fixed transmitters, such as base stations for radio (cellular/cordless) telephones and land mobile radios, amateur radio, AM and FM radio broadcast and TV broadcast cannot be predicted theoretically with accuracy. To assess the electromagnetic environment due to fixed RF transmitters, an electromagnetic site survey should be considered. If the measured field strength in the location in which the DRYPRO 873 is used exceeds the applicable RF compliance level above, the DRYPRO 873 should be observed to verify normal operation. If abnormal performance is observed, additional measures may be necessary, such as re-orienting or relocation the DRYPRO 873.			
b Over the frequency range 150 kHz to 80 MHz, field strengths should be less than [3]V/m.			

Table 4 (support for IEC 60601-1-2:2007)

Recommended separation distances between portable and mobile RF communications equipment and the DRYPRO 873			
The DRYPRO 873 is intended for use in and electromagnetic environment in which radiated RF disturbances are controlled. The customer or the user of the DRYPRO 873 can help prevent electromagnetic interference by maintaining a minimum distance between portable and mobile RF communications equipment (transmitters) and the DRYPRO 873 as recommended below, according to the maximum output power of the communications equipment.			
Rated maximum output power of transmitter W	Separation distance according to frequency of transmitter m		
	150 kHz to 80 MHz $d=[1.2] \sqrt{P}$	80 MHz to 800 MHz $d=[1.2] \sqrt{P}$	800 MHz to 2.5 GHz $d=[2.3] \sqrt{P}$
0.01	0.12	0.12	0.23
0.1	0.38	0.38	0.73
1	1.2	1.2	2.3
10	3.8	3.8	8
100	12	12	23
For transmitters rated at a maximum output power not listed above, the recommended separation distance d in meters (m) can be estimated using the equation applicable to the frequency of the transmitter, where P is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer. [NOTE] At 80 MHz and 800MHz, the separation distance for the higher frequency range applies. [NOTE] These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.			

Table 5 (support for IEC 60601-1-2:2014)

Phenomenon	Basic EMC standard or test method	Immunity test levels
Electrostatic discharge	IEC 61000-4-2	±8 kV contact ±2 kV, ±4 kV, ±8 kV, ±15 kV air
Radiated RF EM fields	IEC 61000-4-3	3 V/m 80 MHz - 2.7 GHz, 5.1 GHz - 5.8 GHz 80 % AM at 1 kHz
Proximity fields from RF wireless communications equipment	IEC 61000-4-3	See the following table "●Test specifications for Enclosure port immunity to RF wireless communications equipment"
Electrical fast transients / bursts	IEC 61000-4-4	±2 kV input a.c. power port ±1 kV signal input/output parts port 100 kHz repetition frequency
Surges	IEC 61000-4-5	±0.5 kV, ±1 kV line-to-line ±0.5 kV, ±1 kV, ±2 kV line-to-ground
Conducted disturbances induced by RF fields	IEC 61000-4-6	3 V 0.15 MHz - 80 MHz 6V in ISM bands between 0.15 MHz and 80 MHz a 80 % AM at 1 kHz
Rated power frequency magnetic fields	IEC 61000-4-8	30 A/m
Voltage dips	IEC 61000-4-11	0 % UT; 0.5 cycle At 0°, 45°, 90°, 135°, 180°, 225°, 270° and 315° 0 % UT; 1 cycle and 70 % UT; 25/30 cycle b Single phase: at 0°
Voltage interruptions	IEC 61000-4-11	0 % UT; 250/300 cycle b
[NOTE] UT is the a.c. mains voltage prior to application of the test level.		
a. The ISM (industrial, scientific and medical) bands between 0.15 MHz and 80 MHz are 6.765 MHz to 6.795 MHz; 13.553 MHz to 13.567 MHz; 26.957 MHz to 27.283 MHz; and 40.66 MHz to 40.70 MHz.		
b. E.g. 10/12 means 10 periods at 50 Hz or 12 periods at 60 Hz.		

● Test specifications for Enclosure port immunity to RF wireless communications equipment

Test frequency (MHz)	Modulation	Immunity test level (V/m)
385	Pulse modulation 18 Hz	27
450	FM ±5 kHz deviation 1 kHz sine	28
710	Pulse modulation 217 Hz	9
745		
780		
810	Pulse modulation 18 Hz	28
870		
930		
1720	Pulse modulation 217 Hz	28
1845		
1970		
2450	Pulse modulation 217 Hz	28
5240	Pulse modulation 217 Hz	9
5500		
5785		

# **Chapter 2**

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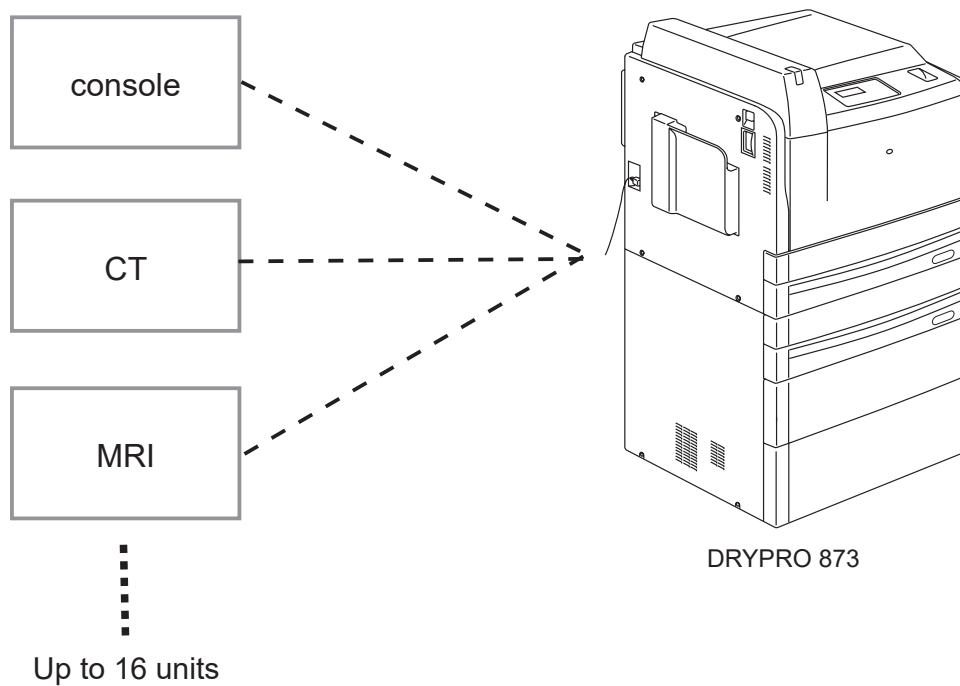
## **Product Outline**

## 2.1 Outline of DRYPRO 873

### 2.1.1 System Configuration Example

Images to print to film are sent to the DRYPRO 873 from diagnostic equipment with a DICOM communication function.

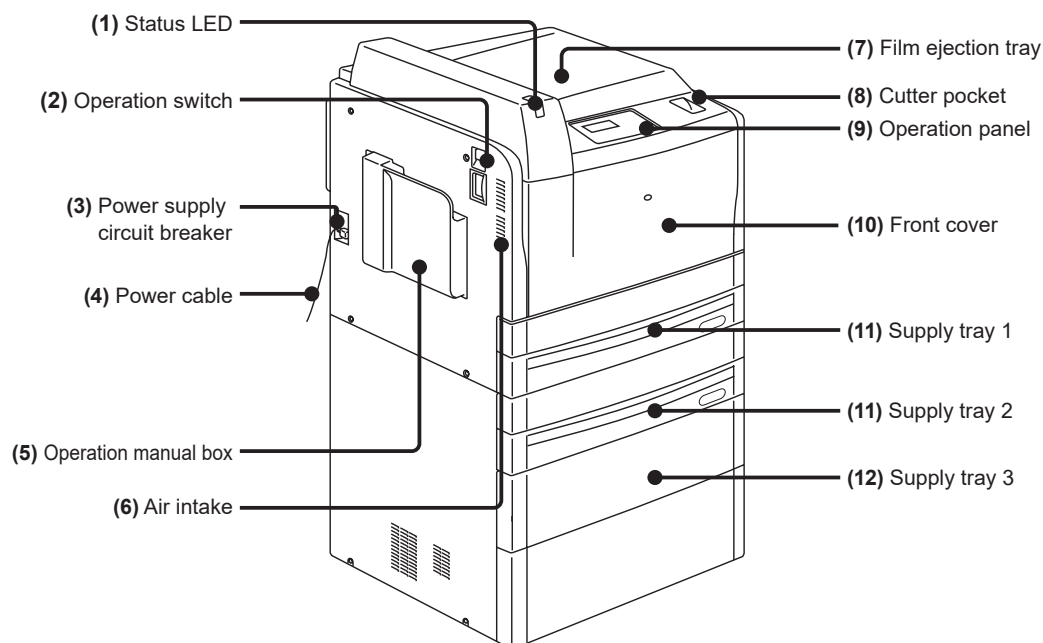
#### ■ Example of standard configuration



## 2.2 Names of Parts

Names of parts and functions of DRYPRO 873 are given below:

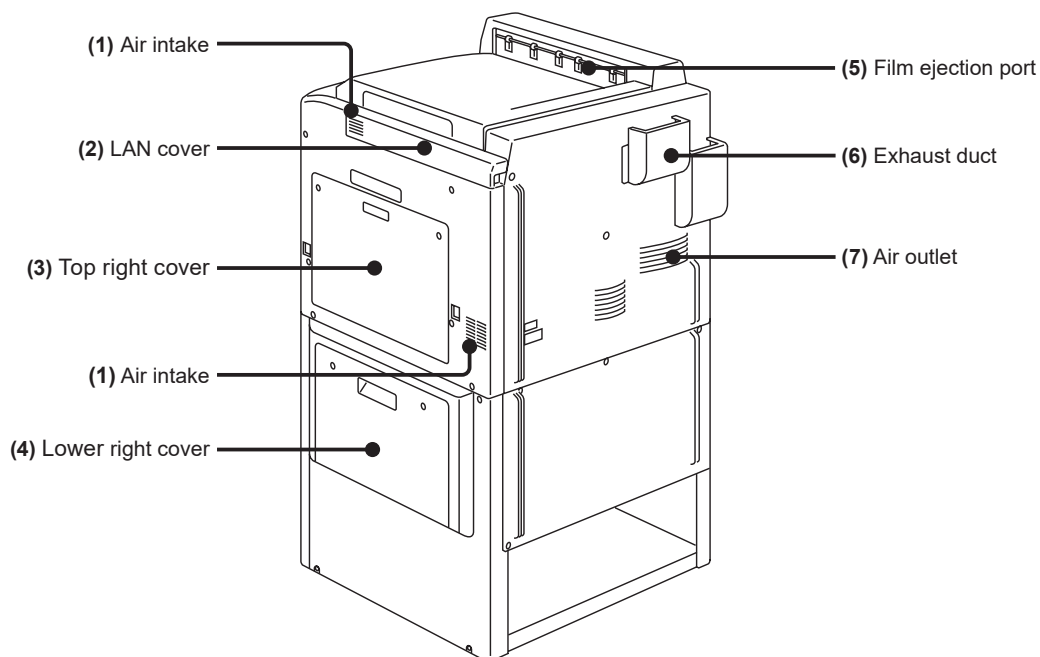
### 2.2.1 Front and Left Side



Number	Name	Function	Refer to
(1)	Status LED	How the LED is lit indicates various states.	3.2.2 Status LED Display (page 41)
		OFF	
		Power off, standby mode, shutting down, rebooting, or updating	
		Flashing blue	
		Increasing temperature, or printing	
		Blue light ON	
		Ready to print	
		Flashing red	
		Not ready to print (error, resolving error, or all trays are empty)	
		Red light ON	
		Not ready to print (one tray is empty, maintenance is being performed, film is being replaced, filter is being replaced, or unit is being cleaned)	
(2)	Operation switch	Starts and stops DRYPRO 873.	3.1 Starting and Shutting Down (page 36)
(3)	Power supply circuit breaker	Used to turn on/off the main power supply.	3.1 Starting and Shutting Down (page 36)
(4)	Power cable	Used to connect between DRYPRO 873 and the power supply.	—
(5)	Operation manual box	Operation manual is stored.	—
(6)	Air intake	Draws air to cool the inside.	5.3.3 Cleaning Air Intakes/Outlets (page 108)
(7)	Film ejection tray	Printed films are ejected into this tray.	5.3.1 Cleaning Film Ejection Tray (page 107)
(8)	Cutter pocket	Holds the special cutter for opening a film package (barrier bag).	—
(9)	Operation panel	Operates DRYPRO 873. Additionally, messages are displayed on this panel.	2.2.3 Operation Panel (page 29)

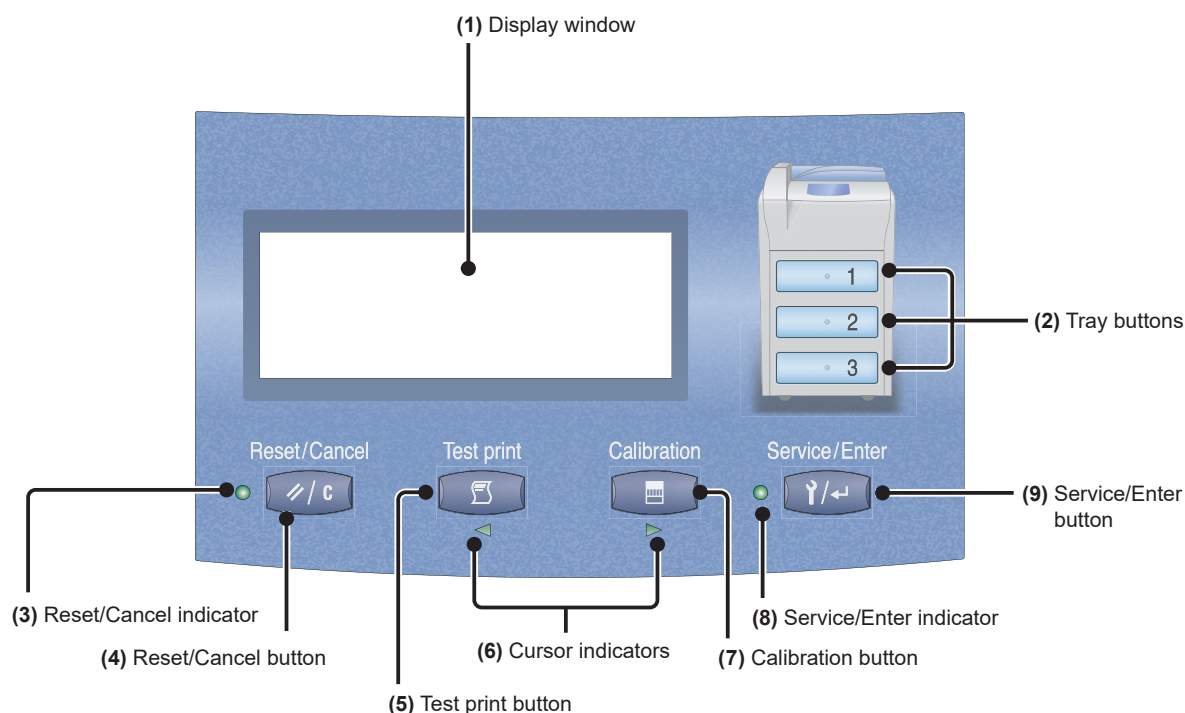
Number	Name	Function	Refer to
(10)	Front cover	Open this cover to remove the film stuck in the heat process unit or the cooling / transport unit when a jam occurs. Also, open it to change the deodorant filter.	—
(11)	Supply trays 1 and 2	Holds films.	2.2.5 Supply Tray (page 32)
(12)	Supply tray 3	Used to install the optional expansion tray and mammography media expansion tray.	2.2.6 Expansion tray (optional) (page 32) 2.2.7 Mammography media expansion tray (optional) (page 33)

## 2.2.2 Rear, Right Side and Top



Number	Name	Function	Refer to
(1)	Air intake	Draws air to cool the inside.	5.3.3 Cleaning Air Intakes/Outlets (page 108)
(2)	LAN cover	Ethernet port and UPS serial port cover.	2.2.4 Interior (page 30)
(3)	Top right cover	Open this cover to remove the film stuck in the position regulation unit when a jam occurs.	4.5.1 Film Jam Between the Supply tray 1 and 2 and the Position Regulation Unit (page 85)
(4)	Lower right cover	If a film jam occurs in the expansion supply tray, open this cover and remove the jammed film.	4.5.4 Film Jam from Supply tray 3[optional] (Elevating Transportation Unit) (page 93) 4.5.5 Film Jam from Supply tray 3[optional] (Position Regulation Unit) (page 95)
(5)	Film ejection port	Printed films are ejected.	—
(6)	Exhaust duct	Discharges air used to cool the inside.	—
(7)	Air outlet	Discharges air used to cool the inside.	5.3.3 Cleaning Air Intakes/Outlets (page 108)

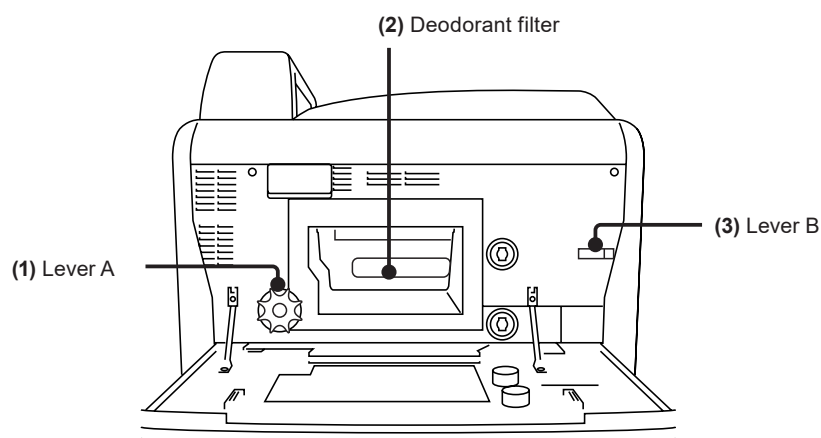
## 2.2.3 Operation Panel



Number	Name	Function	Refer to
(1)	Display window	Shows the status of DRYPRO 873.	3.2.1 Current Status Display (page 40)
(2)	Tray buttons	Press a button to select a tray. The buttons of the available trays light up and flash.	3.4 Calibration (page 50) 3.3 Loading Films (page 44) 5.2.2 How to Print QC Patterns (page 104)
(3)	Reset/Cancel indicator	Lights up when the Reset/Cancel button is enabled.	—
(4)	Reset/Cancel button	Press this button to resolve errors or cancel operations.	3.4 Calibration (page 50) 3.6 Maintenance Mode (page 54) 4.4.1 Reset from Operation Panel (page 82) 5.2.2 How to Print QC Patterns (page 104)
(5)	Test print button	Press this button to print QC patterns. Use this button to move the cursor in Maintenance mode and on the operation screen.	5.2.2 How to Print QC Patterns (page 104)
(6)	Cursor indicators	Lights up when the Service/Enter button is enabled.	3.6 Maintenance Mode (page 54)
(7)	Calibration button	Press this button to print the calibration sheet. Use this button to move the cursor in Maintenance mode and on the operation screen.	3.4 Calibration (page 50)
(8)	Service/Enter indicator	Lights up when the Service/Enter button is enabled.	—
(9)	Service/Enter button	Press this button to enter the Maintenance mode to display detailed information about the main unit or change the settings. Use this button in Maintenance mode to select and set items.	3.6 Maintenance Mode (page 54)

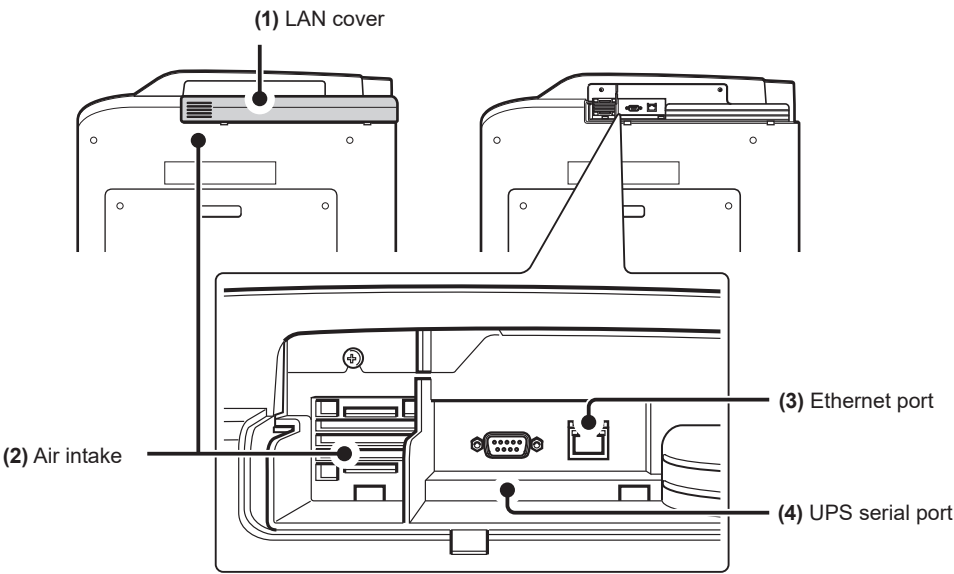
## 2.2.4 Interior

### Inside the Front Cover




Number	Name	Function	Refer to
(1)	Lever A	Turn this lever to remove a film stuck in the heat process unit when a jam occurs.	4.5.2 Film Jam in Heat Process Unit (page 88)
(2)	Deodorant filter	Removes odors emitted during heat process. Periodic change is needed.	5.4 Changing Deodorant Filter (page 109)
(3)	Lever B	Used to open the top right cover.	4.5.1 Film Jam Between the Supply tray 1 and 2 and the Position Regulation Unit (page 85)

Inside the LAN Cover

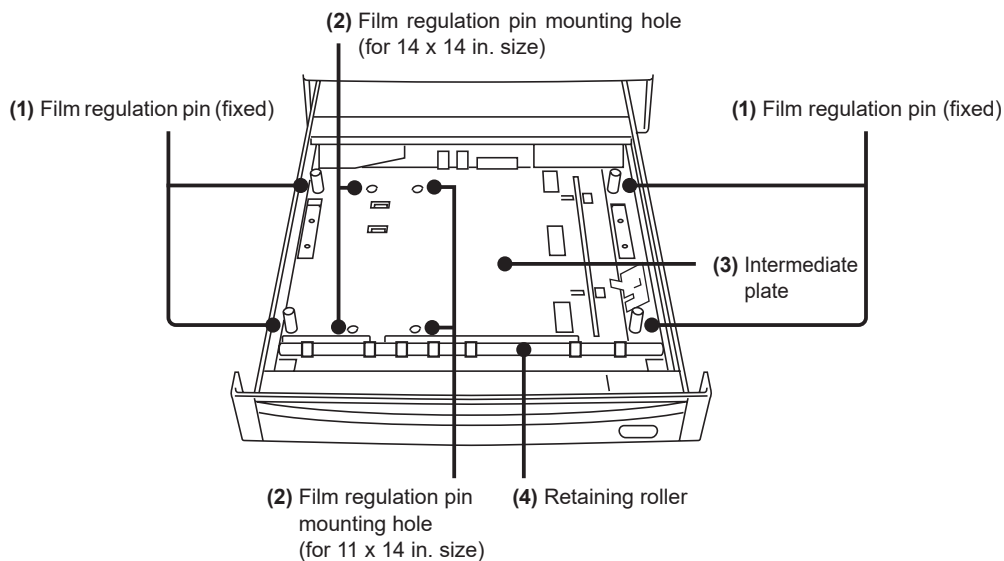


Num-ber	Name	Function	Refer to
(1)	LAN cover	Ethernet port and UPS serial port cover.	—
(2)	Air intake	Draws air to cool the inside.	5.3.3 Cleaning Air Intakes/Outlets (page 108)
(3)	Ethernet port	Used for network connection.	—
(4)	UPS serial port	When a backup battery is used, its serial cable is connected here.	—

Ethernet Port LED

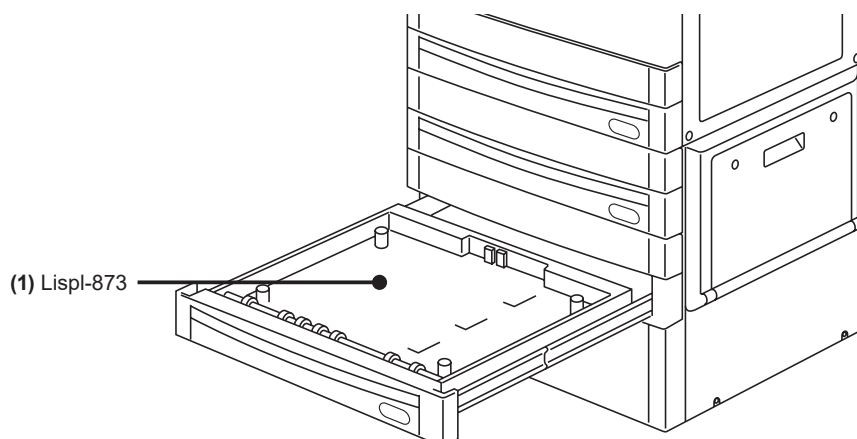
Communication speed LED (left side)			Link/Activity LED (right side)	
Communication speed	LED condition		Communication condition	LED condition
10Mbps	OFF		Link	Flashes green
100Mbps	Green light ON		Activity	Green light ON
1000Mbps	Orange light ON			

## 2.2.5 Supply Tray



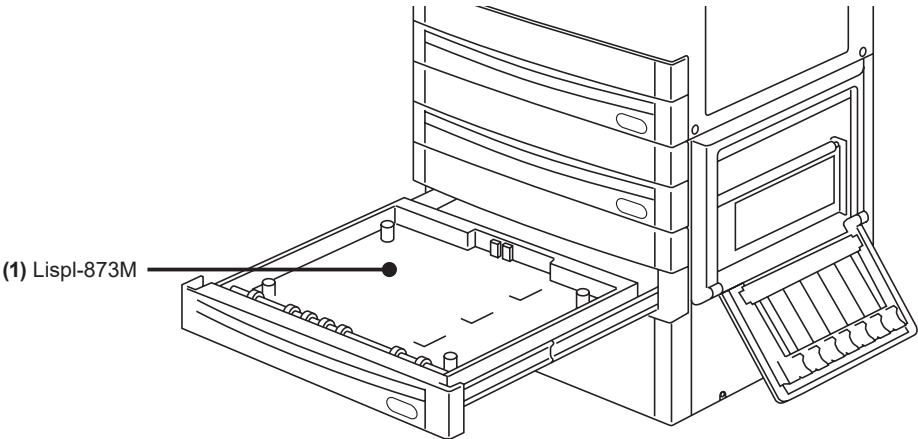
Number	Name	Function	Refer to
(1)	Film regulation pin (fixed)	Regulates the film position.	—
(2)	Film regulation pin mounting hole	When using 14 x 14 in. and 11 x 14 in. films, install the supplied film regulation pins.	—
(3)	Intermediate plate	Resin board on which films are put.	—
(4)	Retaining roller	Used to pull only film package (barrier bag) and put films in the supply tray.	—

## 2.2.6 Expansion tray (optional)



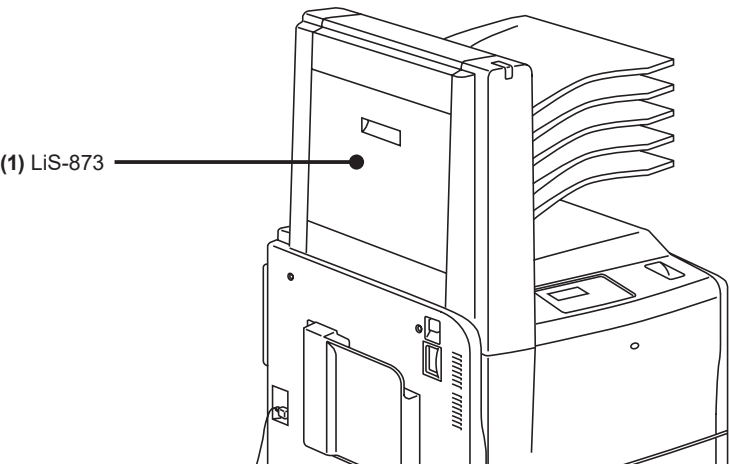
Number	Name	Function	Refer to
(1)	Expansion tray (Lispl-873)	This is the expansion tray. Attach it to supply tray 3.	—

2.2.7 Mammography media expansion tray (optional)



Num-ber	Name	Function	Refer to
(1)	Mammography media expansion tray (Lispl-873M)	This is the mammography media expansion tray. Attach it to supply tray 3.	—

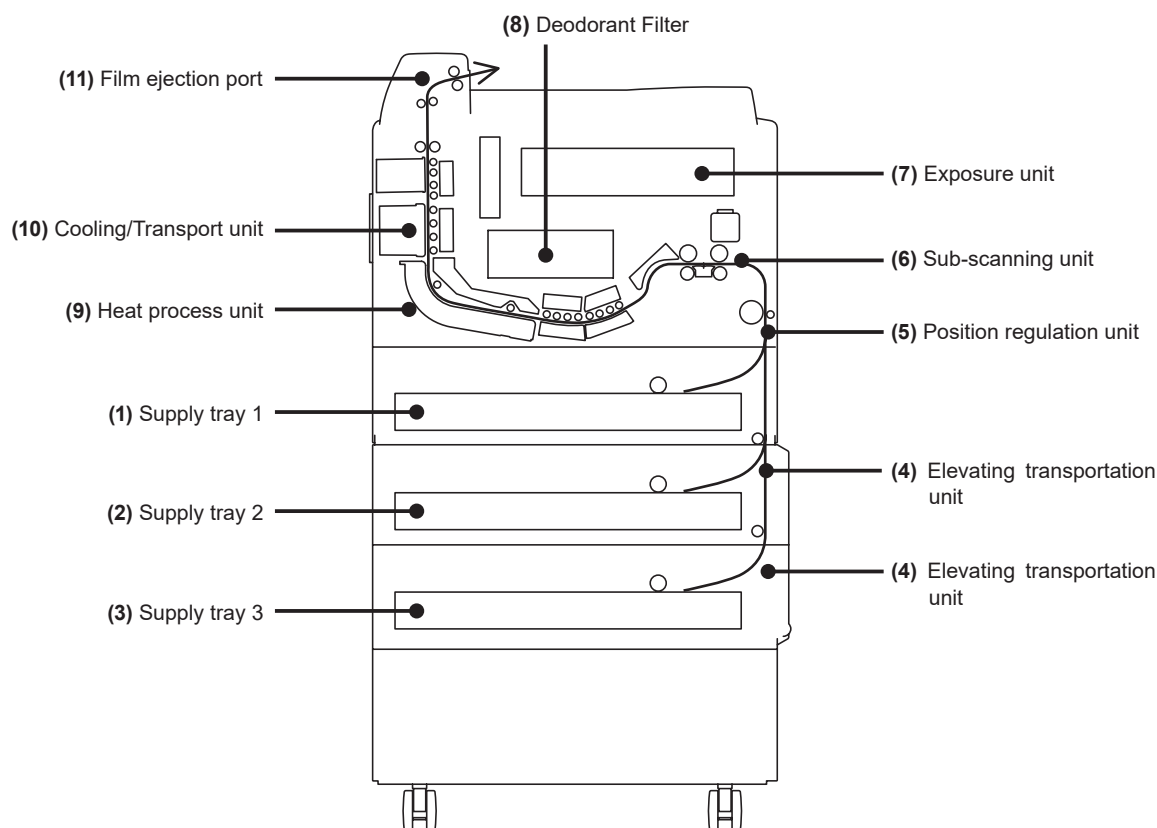
2.2.8 Sorter (optional)



Num-ber	Name	Function	Refer to
(1)	Expansion sorter (LiS-873)	This is the optional expansion sorter. It can output film to six separate bins.	—

## 2.3 Structure

The structure of DRYPRO 873 is shown below. Film is fed in the order from (1) ((2), (3)) to (11) during the print process.



Number	Name	Function	Refer to
(1)	Supply tray 1	Picks up a sheet of film in the supply tray 1 and transports to the position regulation unit.	—
(2)	Supply tray 2	Picks up a sheet of film in the supply tray 2 and transports to the elevating transportation unit.	—
(3)	Supply tray 3	Picks up a sheet of film in the expansion tray and transports it to the position regulation unit.	2.2.6 Expansion tray (optional) (page 32) 2.2.7 Mammography media expansion tray (optional) (page 33)
(4)	Elevating transportation unit	Transport film transported from the supply tray 2 and 3 to the position regulation unit.	—
(5)	Position regulation unit	Regulates the horizontal position of the film transported from the supply unit to the exposure unit.	—
(6)	Sub-scanning unit	Transports film transported from the position regulation unit to the exposure unit.	—
(7)	Exposure unit	Scans laser beam in synchronization with the film transportation and writes images on the film.	—
(8)	Deodorant Filter	Removes odors emitted during heat process. Periodic change is needed.	5.4 Changing Deodorant Filter (page 109)
(9)	Heat process unit	Develops the exposed film by heating.	—
(10)	Cooling/Transport unit	Cools and discharges heat developed film.	—
(11)	Film ejection port	Printed films are ejected.	—

# **Chapter 3**

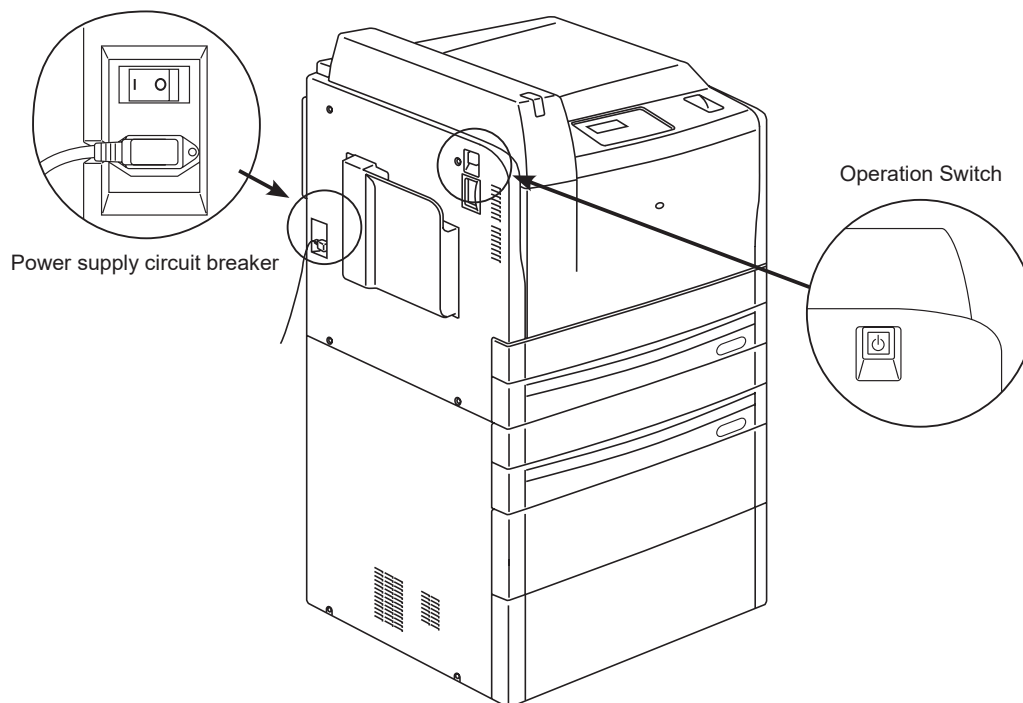
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## **Operation from Main Unit**

## 3.1 Starting and Shutting Down

This section describes how to start and shut down DRYPRO 873.

Leave the power supply circuit breaker on during normal use.

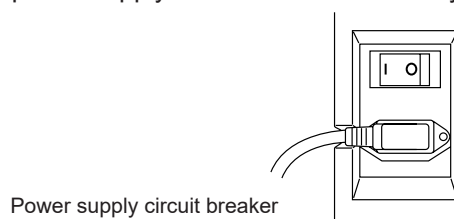


### 3.1.1 How to Start

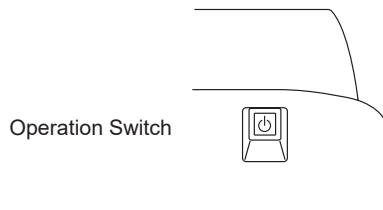
**1**

**Turn on the DRYPRO 873 power supply circuit breaker.**

If the power supply circuit breaker is already turned ON, go to the next step.



## 2 Press the operation switch until a beep sounds (about one second).



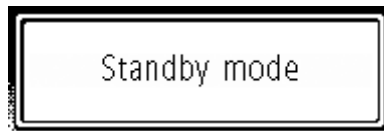
- Pressing the operation switch again shuts down. In such a case, press the operation switch again.

Initialization and warm-up of DRYPRO 873 will start. Upon completion of the warm-up, the machine is ready to print.

### 3.1.2 Standby Mode

When the backlight of the display window turns off and the following message is displayed, the main unit is in standby mode.

When standby mode is canceled and the main unit starts up, the connected PC also starts up.



- The main unit can be used in standby mode by configuring PC. For information on configuring PC, contact Konica Minolta technical representatives.

The main unit can be started from standby mode by using either of the following methods.

#### Pressing the Operation Switch

Press the operation switch as usual. A beep sounds, and the standby mode is canceled.

#### Pressing a Button on the Operation Panel

When an operation panel button (Reset/Cancel, Test Print, Calibration, Service/Enter, or a tray button) is pressed, the following message appears.



Use the [Test print] and [Calibration] buttons to move the cursor.

Select [YES] and press the [Service/Enter] button to cancel the standby mode.

Select [NO] and press the [Service/Enter] button to return to the standby mode display.

When the standby mode is canceled, DRYPRO 873 is started, and the following appears in the display window.



- You cannot print during warm-up.
- You can make settings during warm-up.
- It takes about 3 minutes for the machine to get ready for print. However, it varies according to the season and the ambient room temperature.

### 3.1.3 How to Shut Down

To shut down DRYPRO 873, perform the following steps.



- **Check the following points before performing a shutdown operation.**
  - If the message "Printing..." does not appear in the display window.
- **If the machine is not shut down after the expiration of three minutes or more following a shutdown operation, press and hold the operation switch again for 10 seconds or longer. The machine will be shut down. Then, turn OFF the power supply circuit breaker, and turn it ON again.**
- **After the shutdown operation completes, the deodorizing fan and supply cooling fan continue to operate for about one hour.**
- **When performing the shutdown operation, do not switch the power supply circuit breaker OFF immediately. (To turn the power supply circuit breaker off, wait approximately 1 hour after completing the shutdown operation before switching the breaker off.)**

**1****Press the operation switch until a beep sounds (about one second).**

The message "Now shutting down Please wait a while" appears in the display window, and the status LED turns off.

The machine will be shut down in about 10 seconds.



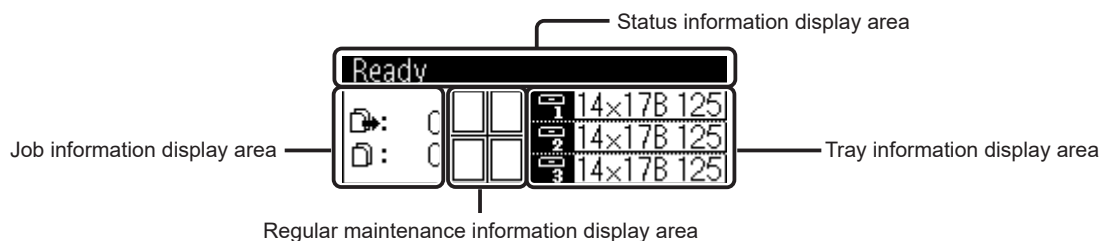
- Leave the power supply circuit breaker ON during normal use.
- For information on how to set the main unit to standby mode, see "3.6.3 Standby Mode" (page 56).

## 3.2 Operation Mode

This section describes operation mode of DRYPRO MODEL 873.

### 3.2.1 Current Status Display

Tray information and the current status are displayed in the display window of the operation panel.



### Status Display

The status of the main unit is shown.





Status Message	Meaning
Warming up. XX minutes to Ready	The machine is warming up.
Ready	The machine is ready to print.
Printing	The machine is printing.
Film Empty	None of the trays have film.
CXXX Warning (where "XXX" are alphanumeric characters consisting of 0 - 9 and A - F.)	Error status (A minor error has occurred. No action is needed.) If action is needed, the display changes.
Clean the roller /Press the 'Service/Enter' (The above messages are displayed alternately.)	Roller Cleaning must be performed.
Filter exchange/Open the front cover (The above messages are displayed alternately.)	The filter must be replaced.
Perform Prev. maintenance/Please contact the Service Center (The above messages are displayed alternately.)	Regular maintenance must be performed.
Perform Calibration	This is displayed when the main unit must be calibrated, after film has been loaded, or when a density read error has been detected. (This is cleared after calibration is performed.)
Select tray	This is displayed when a tray must be selected for printing QC patterns or a calibration sheet.
Not connected to PC/Please refer to the manual (The above messages are displayed alternately.)	The connection with PC could not be established. Refer to "4.1 Need Help?" (page 78).

### Job Information

The amount of film queued for printing is displayed.

Icon	Name	Meaning
	Output Queue	Number of jobs queued for printing
	Number of Prints	Total number of prints for queued jobs. (The actual number of sheets to be printed.)




## Regular Maintenance Information

Icon	Name	Meaning
	Roller Cleaning	Roller Cleaning must be performed.
	Filter Replacement	The filter must be replaced.
	Regular Maintenance	Regular maintenance must be performed.
	Calibration	Calibration must be performed or a density read error has been detected. (This is cleared after calibration is performed.)

3

## Tray Information

The tray information, film size, film type, and number of sheets is displayed for each tray.

Icon	Name	Meaning
	tray 1	Information for tray 1 is displayed to the right of the icon. When the tray becomes empty, the icon is inverted for a set period of time.
	tray 2	Information for tray 2 is displayed to the right of the icon. When the tray becomes empty, the icon is inverted for a set period of time.
	tray 3	Information for tray 3 is displayed to the right of the icon. When the tray becomes empty, the icon is inverted for a set period of time.

Items	display
film size	14×17, 14×14, 11×14, 10×12, 8×10
film type	B (BLUE), C (CLEAR), M (MAMMO)
film number	0 to 126 (The tray is empty when this is "0".)

### 3.2.2 Status LED Display

How the LED is lit indicates various states.

Status Message	Meaning
OFF	Power off, standby mode, shutting down, rebooting, or updating
Flashing blue	Warming Up or printing
Blue light ON	Ready to print
Flashing red	Not ready to print (error, resolving error, or all trays are empty)
Red light ON	Not ready to print (one tray is empty, maintenance is being performed, film is being loaded, filter is being replaced, or unit is being cleaned)

### 3.2.3 Error Display

If an error that requires action occurs, the following message appears.

#### When action is needed to resolve the error



#### When a film jam must be cleared



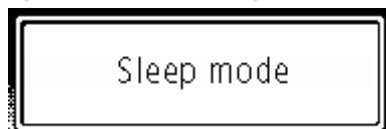
If the above message appears, see "4.5 How to Clear a Film Jam" (page 85).

### 3.2.4 Sleep Mode

The main unit has a sleep mode function.

Sleep mode is a power-saving mode that enables automatic startup when the main unit has not been operated, either from the operation panel or by printing, for a specified period of time.

- 1** The following message appears during sleep mode.



- 2** The following message appears when the operation panel is touched.



- 3** Use the [Test print] and [Calibration] buttons to move the cursor. Select [YES] and press the [Service/Enter] button to cancel sleep mode, or select [NO] to return to the sleep mode display.

### 3.2.5 Unit Busy Message

The following message appears when the main unit is busy, such as when the settings are being changed from PC. The main unit cannot be operated while the following message appears.



### 3.2.6 PC Connection Status

The connection status with PC is displayed.

If the connection status appears as shown below, there may be problem with the network connection between the main unit and PC, or there may be a problem with PC.



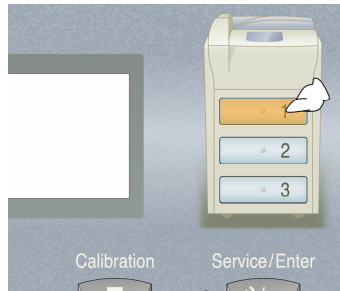
If the above message appears, see "4.1 Need Help?" (page 78).

## 3.3 Loading Films

When the supply tray runs out of film, an audible error/empty sound is produced, the tray button lights up, and the icon of the corresponding tray is inverted for a set period of time. When all trays run out of film, the message "Film Empty" is displayed in the status information display area.

In this case, loading supply films, following the steps below.

### 1 Press the tray button.



The following message appears in the display window.



The supply tray pops out by several centimeters.



• In the following cases, the supply tray will not open.

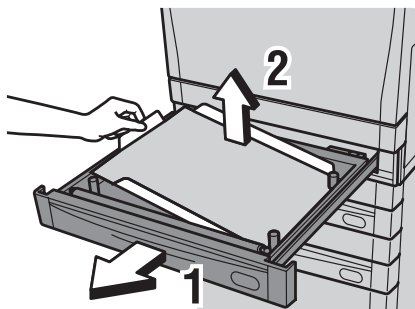
- **When there are films still in the printing process.**

The message "Please wait a while." appears, and then the supply tray will open when printing is completed.

### 2 A description of the step to be taken appears in the display window.



- 3** Slowly pull out the supply tray fully. Remove a protection film and the paper tray remaining in the supply tray.



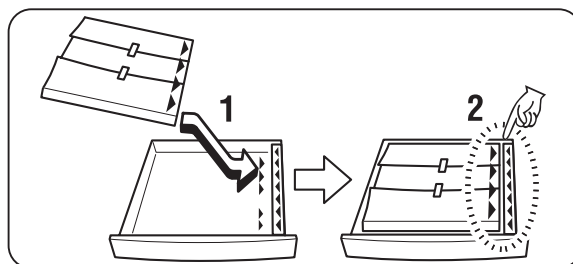
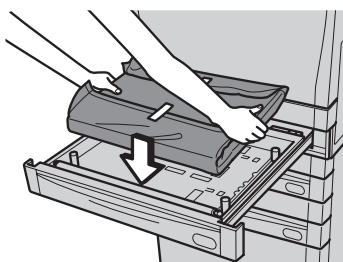
- Do not place an object on the supply tray or lean against the supply tray drawn forth. Failure to observe this caution may cause fault.

- 4** When the cursor indicators light up, use the [Test print] and [Calibration] buttons to display the next step to be taken in the display window.



- 5** Take a new film package out of the box and load it by aligning the ► marks on the package (barrier bag) on top of the ► marks on the center plate of the supply tray.

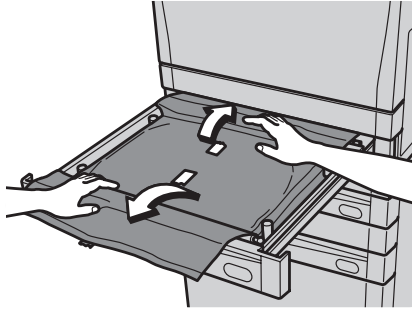
Align the ◀ marks on the tray with the ► marks on the package (barrier bag).



- 6** When the cursor indicators light up, use the [Test print] and [Calibration] buttons to display the next step to be taken in the display window.



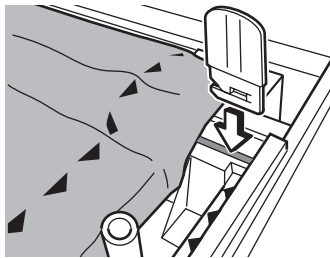
- 7** Remove the seals to extend the front and rear ends of the package (barrier bag).



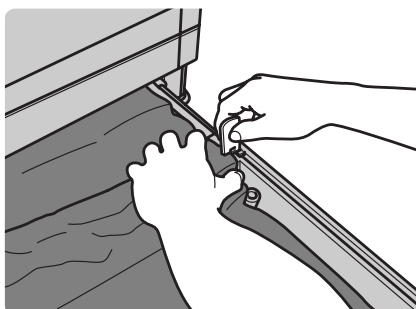
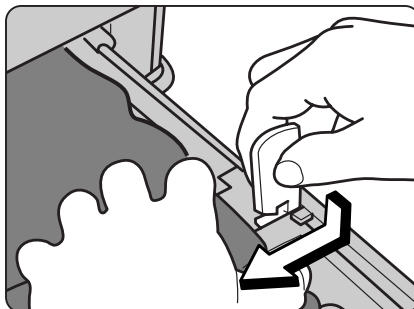
- 8** When the cursor indicators light up, use the [Test print] and [Calibration] buttons to display the next step to be taken in the display window.



- 9** Align the special cutter with the guide (groove) at the back of the supply tray.



- 10** Slide the special cutter along the guide (groove) and cut off the end of the package (barrier bag).



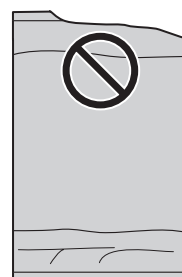
- You can cut it off in either right-to-left or left-to-right direction.
- After using the special cutter, store it in the cutter pocket of the main unit.



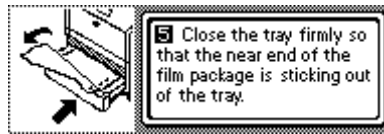
- After cutting it off, do not open the mouth of the package (barrier bag). Otherwise the film may be exposed to light.



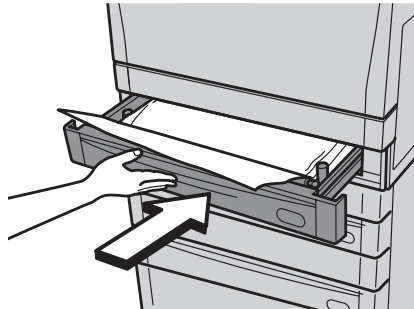
- Cut off the package (barrier bag) in a straight line not to create a slanting cut off section. Otherwise the package (barrier bag) may not be pulled out.



- 11** When the cursor indicators light up, use the [Test print] and [Calibration] buttons to display the next step to be taken in the display window.

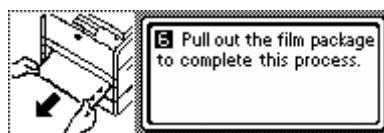


- 12** Push the supply tray as far as it will be locked with the forward end of the package (barrier bag) protruded from the supply tray.



- When pushing the supply tray unit in, do not stop until the operation is completed, and make sure you push the unit firmly to the back of the main unit.

- 13** When the cursor indicators light up, use the [Test print] and [Calibration] buttons to display the next step to be taken in the display window.



- 14** Hold the package (barrier bag) protruding from the supply tray with both hands and slowly pull it out horizontally.





- Check that the tray button for the loaded tray is lit before pulling out the package (barrier bag).
- When pulling out the package (barrier bag), care should be taken not to pull it out at a slant. Otherwise the package (barrier bag) may not be pulled out.



When "Ready" appears in the display window, the machine is ready to print. A sheet of film printed with the calibration pattern for automatic density correction is output when the first print job is received after film has been loaded and when warm-up is completed due to the settings.

Refer to "4.2 How to Resolve Film Loading Error" (page 79) when the following erroneous operation is performed.

- Closed the tray without pulling out the forward end of the package (barrier bag).
- Closed the tray without cutting off the back of the package (barrier bag) with a cutter.
- Closed the tray without installing films.



"4.2 How to Resolve Film Loading Error" (page 79)

## 3.4 Calibration

This function is used to correct the film density property.

This machine provides automatic density control of an image when a new film is loaded via a densitometer incorporated in the cooling / transport unit. You do not normally need to correct the image density. However, if any abnormal density should occur, including the “NG” result of output of the QC pattern in test print, print the calibration sheet, following the steps below. Density correction is automatically performed.

The calibration sheet is used to collect data for automatic density correction (i.e. data whose density is not corrected). If you check or manage the density, use the the QC pattern output in test print.

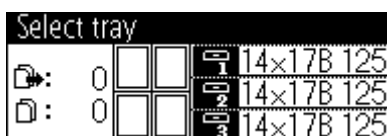


“3.5 Test Print” (page 52)



“5.2 Operation of Test Print” (page 103)

- 1** When "Ready" appears in the status information display area of the display window, press the [Calibration] button. The message "Select tray" appears in the display window, and the tray buttons for the trays that are ready for film transport light up.



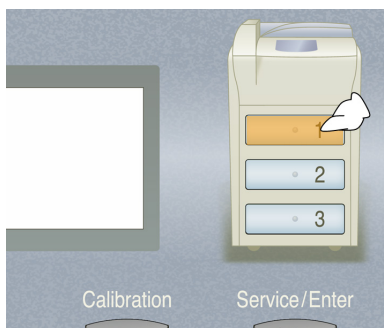
The tray button of the tray selected for priority calibration, such as regular calibration, blinks.

To cancel calibration, press the [Reset/Cancel] button. "Ready" appears in the display window.

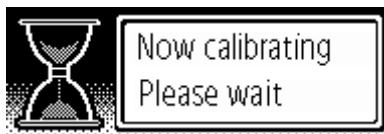


- To perform calibration because the result of output of QC pattern was “NG”, select the tray in which the abnormal density occurred.

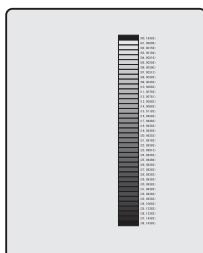
- 2** Press the tray button.



The following message appears in the display window.



The calibration sheet as shown below will be printed.



At this moment, the calibration data will be read with the built-in densitometer. Once calibration has been completed, the message display window goes back to the normal display ("Ready").



- If the calibration pattern cannot be read properly with the built-in densitometer, the message "Perform Calibration" appears in the display window. In this case, calibrate the tray again. If the densitometer fails to read the calibration pattern again, contact your nearest Konica Minolta technical representatives.

## 3.5 Test Print

When test print is performed, the QC pattern for evaluating the image quality is printed. The density of the QC pattern is measured with the built-in densitometer at the same time and the density is automatically checked. You can check the image quality for problems by visually checking the printed QC patterns. Perform test print for each supply tray.

This section describes how to print QC patterns from the operation panel of the main unit. For information about the operation of test print in general, see “5.2 Operation of Test Print” (page 103), and how to judge the results after printing QC patterns, see “5.2.3 How to Judge QC Pattern” (page 105).

To print QC patterns, perform the following steps.

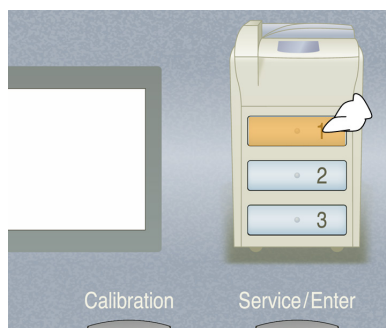
### 1 Press the [Test print] button on the operation panel.

The following message appears in the message display window.

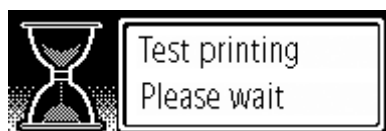


To cancel calibration, press the [Reset/Cancel] button. "Ready" appears in the display window.

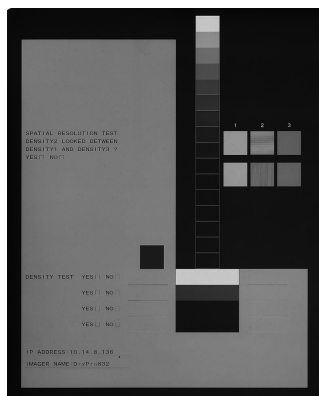
### 2 Press the Tray button.



The following message appears in the message display window.



The QC patterns as shown below will be printed.



The message display window goes back to the normal display ("Ready").



- If the film type of the selected tray is M (Mammo), the calibration pattern and Mammo QC pattern are output on two sheets.

## 3.6 Maintenance Mode

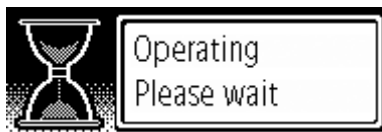
Maintenance mode is the mode for checking and changing settings when the main unit is not ready to print. This mode is also used to perform other functions, such as roller cleaning and enabling standby mode. The password must be entered (using a special operation) to change the settings.



- In maintenance mode, the main unit cannot print or receive print data from diagnostic equipment. All stored print jobs are executed after exiting maintenance mode.
- Maintenance mode is not available when a user is logged in from an external device, such as PC.

### 3.6.1 Enabling and Using Maintenance Mode

- 1 When the [Service/Enter] indicator is lit up, press the [Service/Enter] button to display the following message and maintenance menu in the display window.



- 2 The maintenance menu has two pages. You must enter the password to display page two of the maintenance menu.
- 3 Move the cursor to the [Password] icon, and press the [Service/Enter] button to display the password input screen.



- 4** Use the tray buttons to enter the numbers "1," "2," or "3," corresponding to the tray numbers.



- 5** Enter [12321] for the password and press the [Service/Enter] button to display page two of the maintenance menu.

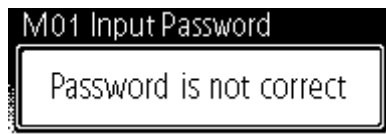
The maximum length of the password is ten digits.



- 6** Press the [Test print] button or the [Calibration] button to move the cursor, and move the cursor to the end to go back to page one.



- 7** If the entered password is incorrect, a message is displayed indicating this.



- 8** Wait a moment or press any button to return to page one of the maintenance menu.













With the maintenance menu displayed, use the [Test print] and [Calibration] buttons to move the cursor to a menu item (icon) and press the [Service/Enter] button to select that item. The cursor cannot move to menu items that cannot be selected. To cancel maintenance mode and exit the maintenance menu, press the [Reset/Cancel] button.



- Once you enter the password, you do not need to enter it again until you exit maintenance mode. To cancel maintenance mode and exit the maintenance menu, press the [Reset/Cancel] button on page one or two of the maintenance menu.

### 3.6.2 Maintenance Menu

Maintenance mode consists of the following menus.


Icon	Item	Meaning
	Standby Mode	Enables standby mode. In standby mode, the warm-up time of the main unit is shortened and the power of the connected PC is turned off. This menu item may not be available (the icon is grayed out) depending on the setting of PC.
	Film Processing Amount	Displays the cumulative data of the film currently being used. You can view the data on a daily, weekly, or monthly basis for each film size and type.
	QC	Displays the output results for the QC patterns. Displays the results for the last three QC patterns. The history can also be deleted.
	Error History	Displays the error codes for errors that occurred.
	Roller Cleaning	Performs roller cleaning. This menu item may not be available (the icon is grayed out) when the mammography media expansion tray is not installed in Tray 3 (expansion tray). The icon blinks when the set time has passed since the last roller cleaning.
	Password	Displays the screen in which a password is entered.
	System Reset	Clears all queued jobs and restarts the main unit.
	Main Unit Settings	Lets you configure the tray, film, and sorter settings.
	Current Date & Time	Sets the date and time for the main unit and connected PC. The date can be set up to December 31, 2037. (The date and time setting may not be available depending on the setting of your computer.)
	Sleep Mode Setting	Lets you configure the sleep mode setting of the main unit.
	Network Information	Displays the network information for the main unit and connected PC.
	Service Information	Displays the serial number, running time, total number of output sheets, and version information of the main unit.

### 3.6.3 Standby Mode

In standby mode, the warm-up time of the main unit is shortened and the power of the connected PC is turned off.

This menu item may not be available depending on the setting of PC.

#### 1 Enable maintenance mode.

 "3.6.1 Enabling and Using Maintenance Mode" (page 54)

#### 2 Use the [Test print] and [Calibration] buttons to move the cursor to the [Standby Mode] icon . Press the [Service/Enter] button to select the item.

- 3** The following message appears in the display window.



- 4** Use the [Test print] and [Calibration] buttons to move the cursor to [YES] or [NO].

- 5** Press the [Service/Enter] button to select the item.

Select [YES] to enable standby mode.

Select [NO] to return to the maintenance menu.

- 6** Press the [Reset/Cancel] button to return to the maintenance menu.

3

### 3.6.4 Film Processing Amount



- If the date is changed using [Current Date & Time], the film count (Film Processing Amount) prior to the change may be lost.



"3.6.10 Current Date & Time" (page 67)

This displays the cumulative data of the film currently being used.

You can view the cumulative data on a daily, weekly, or monthly basis for each film size and type loaded in the trays.


Data is calculated for film output normally and does not include calibration sheets output after film is loaded.

Cumulative data	Meaning
Daily	When [Daily] is selected, the daily cumulative data for a 90-day period is displayed. (Data for the most recent day is displayed at the top of the left pane.) This is the total number of sheets output in the time period from 12:00:00 AM to 11:59:59 PM.
Weekly	When [Weekly] is selected, the weekly cumulative data for a 12-week period is displayed. (Data for the most recent week is displayed at the top of the left pane.) This is the total number of sheets output in the time period from Sunday to Saturday.
Monthly	When [Monthly] is selected, the monthly cumulative data for a three-month period is displayed. (Data for the most recent month is displayed at the top of the left pane.) For months with less than 31 days, the data is calculated automatically on the last day of the month.

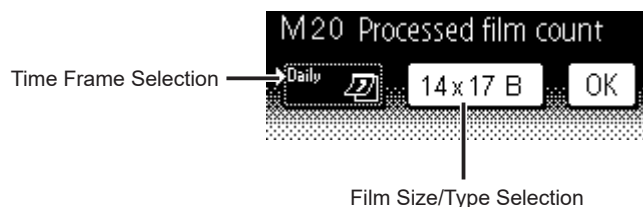
- 1** Enable maintenance mode.



"3.6.1 Enabling and Using Maintenance Mode" (page 54)

- 2** Use the [Test print] and [Calibration] buttons to move the cursor to the [Film Processing Amount] icon . Press the [Service/Enter] button to select the item.

- 3** The following message appears in the display window.



- 4** Use the [Test print] and [Calibration] buttons to move the cursor to an item, and press the [Service/Enter] button to select and set that item.

- [Time Frame Selection]

Press the [Service/Enter] button to change the time frame.

The setting changes in the order of [Daily] → [Weekly] → [Monthly].

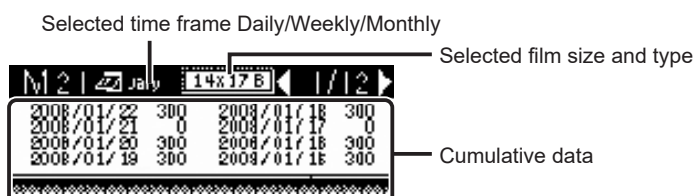
- [Film Size/Type Selection]

Press the [Service/Enter] button to change the film size and type.

The setting changes in the order of [Tray 1] → [Tray 2] → [Tray 3] → [Tray 1].

(The available settings vary depending on the size and type of the loaded film.)

- 5** Select [OK] and press the [Service/Enter] button to display the cumulative data for the selected time frame and the film size and type.



- 6** Press the [Reset/Cancel] button to return to the previous screen.

In the case of Daily or Weekly, use the [Test print] and [Calibration] buttons to switch pages. There are 12 pages for Daily and 2 pages for Weekly.


### 3.6.5 QC

This displays the output results for the QC patterns. The history can also be deleted.

- 1** Enable maintenance mode.



"3.6.1 Enabling and Using Maintenance Mode" (page 54)

- 2** Use the [Test print] and [Calibration] buttons to move the cursor to the [QC Results] icon . Press the [Service/Enter] button to select the item.

**3** The following message appears in the display window.



**4** Use the [Test print] and [Calibration] buttons to move the cursor to an item, and press the [Service/Enter] button to select and set that item.

- [QC History]  
Press the [Service/Enter] button to display the QC history screen.  
See "QC History Screen".
- [Clear QC History]  
Press the [Service/Enter] button to display the Clear QC history screen.  
See "Clear QC History Screen".

**5** Press the [Reset/Cancel] button to return to the previous screen.

**Results Data Screen**

This displays the results for the three most recent QC patterns.  
The density values (x100) for steps 1 to 4 are displayed.  
If there is a density read error for steps 1 to 4, [NG] appears.  
(If [NG] appears, perform a calibration, and then try printing the QC pattern again.)

Selected tray

M31 QC history	1	2	3	4
2008/01/20 10:18	020	120	220	300
2008/01/20 10:17	NG	NG	NG	NG
2008/01/20 10:16	020	120	220	300

Results data



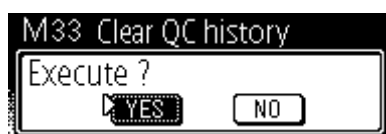
- The displayed results data is rounded off to after the decimal point. Therefore, the results may be different when the same values are displayed.

- Use the [Test print] and [Calibration] buttons to change the selected tray.
- Alternatively, press the tray button to change the selected tray.
- Press the [Reset/Cancel] button to return to the QC results screen.

## Clear QC History Screen





- Press the [Test print] and [Calibration] buttons to move the cursor. [Service/Enter] Press the [Service/Enter] button to select the item.
- Press the [Reset/Cancel] button to return to the previous screen.
- With [Tray Selection] selected, press the [Service/Enter] button to change the selected tray.  
The setting changes in the order of [Tray 1] → [Tray 2] → [Tray 3] → [Tray 1].  
(The available settings vary depending on the number of loaded trays.)
- Use the [Test print] and [Calibration] buttons to move the cursor to [YES] or [NO].
- Press the [Service/Enter] button to select the item. Select [YES] to delete the the QC results for the selected tray. Select [NO] to return to the previous screen.

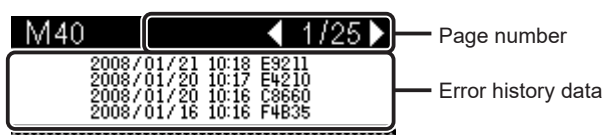


- Press the [Reset/Cancel] button to return to the previous screen.

### 3.6.6 Error History

This displays the history of errors that have occurred. Up to 100 errors can be displayed.

- 1 Enable maintenance mode.**  
 "3.6.1 Enabling and Using Maintenance Mode" (page 54)
- 2 Use the [Test print] and [Calibration] buttons to move the cursor to the [Error History] icon . Press the [Service/Enter] button to select the item.**
- 3 The following message appears in the display window.**





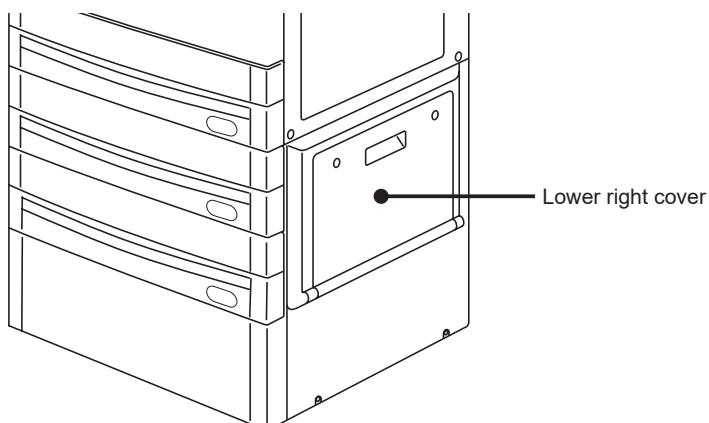
- 4** Use the [Test print] and [Calibration] buttons to navigate through the pages. The error history may contain up to 25 pages.
- 5** Press the [Reset/Cancel] button to return to the maintenance menu.

### 3.6.7 Roller Cleaning

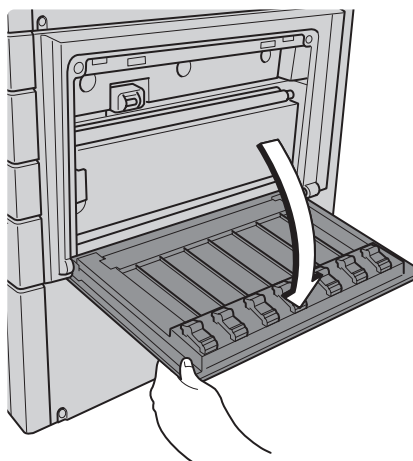
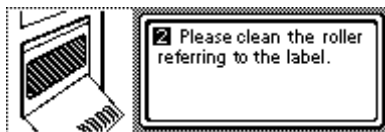
When the mammography media expansion tray is installed in Tray 3 (expansion tray), the [Roller Cleaning] icon appears in the display window each time 2,000 sheets has been printed. Selecting and activating this item enables cleaning of the cleaning roller.

This function can also be used to clean the cleaning roller even if the [Roller Cleaning] icon does not appear in the display window.

- 1** Enable maintenance mode.  
 "3.6.1 Enabling and Using Maintenance Mode" (page 54)
- 2** Use the [Test print] and [Calibration] buttons to move the cursor to the [Roller Cleaning] icon . Press the [Service/Enter] button to select the item.
- 3** The operation screen appears.



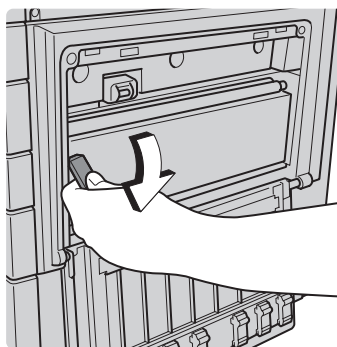
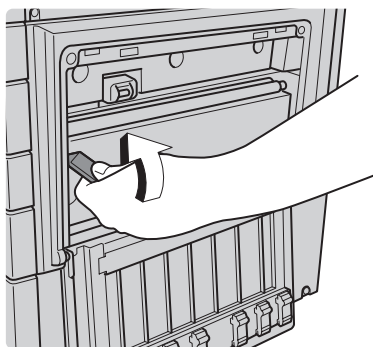
- 4** Follow the instructions in the display window, and open the lower right cover.



- 5** Follow the instructions on the label of the lower right cover for cleaning the cleaning roller.

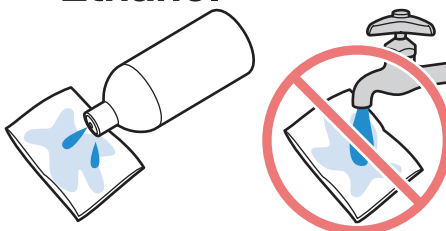
### Cleaning Method

Lift the lever up and down to rotate the cleaning roll.

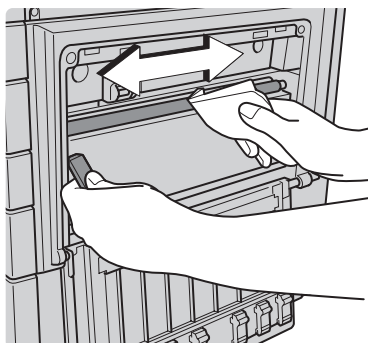


1. Moisten the supplied cloth with ethanol.

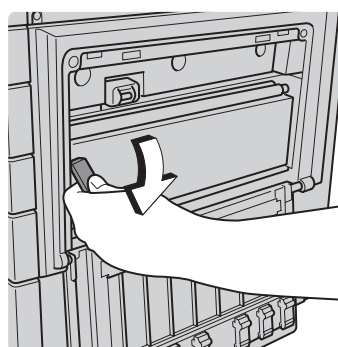
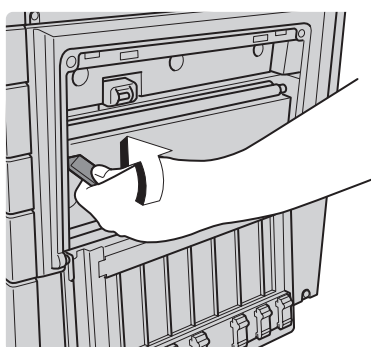
### Ethanol



2. Wipe the cleaning roller with the cloth.

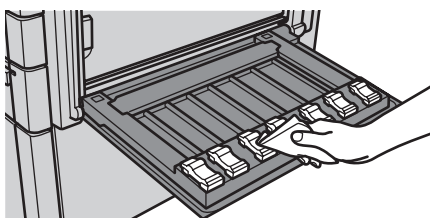


3. Lift the lever up and down once.

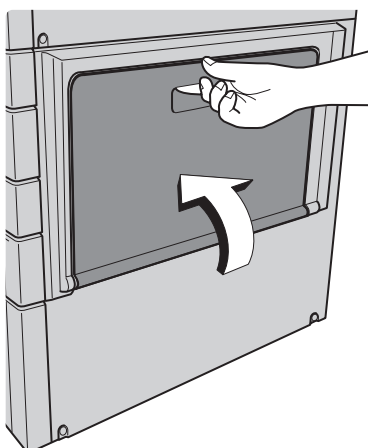


4. Repeat Steps 1 to 3 10 times.

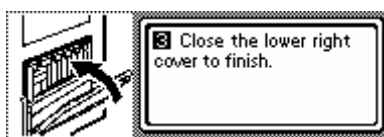
5. Wipe the guide plate and roller with the cloth.



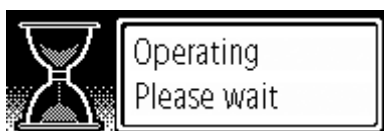
Close the lower right cover.



- 6** After cleaning the cleaning roller, close the cover to complete the cleaning.



- 7** When the cover is closed, the following message appears, and the main unit begins drying the cleaning roller. Drying takes about three minutes to complete.



- 8** When operations have finished, the maintenance menu appears, and roller cleaning is completed.


### 3.6.8 System Reset

This performs a cold start (restart) of the main unit. The connected PC also restarts. When system reset is performed, all queued print data is deleted.

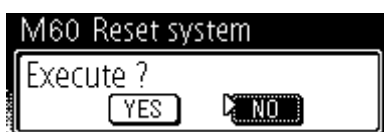
- 1** Enable maintenance mode.



"3.6.1 Enabling and Using Maintenance Mode" (page 54)

- 2** Use the [Test print] and [Calibration] buttons to move the cursor to the [System Reset] icon . Press the [Service/Enter] button to select the item.

- 3** The following message appears in the display window.



- 4** Use the [Test print] and [Calibration] buttons to move the cursor to [YES] or [NO].

- 5** Press the [Service/Enter] button to select the item.

Select [YES] to perform a system reset.

Select [NO] to return to the maintenance menu.

- 6** Press the [Reset/Cancel] button to return to the maintenance menu.

### 3.6.9 Main Unit Settings

You can configure the following tray, film type and size, and sorter settings.

Setting	Meaning
Tray Use	Select whether to use each tray.
Film Size	Select the film size. 8×10, 10×12, 11×14, 14×14, 14×17 (Settings [14×14] and [14×17] are not available when a mammography media tray is installed in supply tray 3.)
Film Type	Select the film type. B (BLUE), C (CLEAR), M (MAMMO) (Settings [B] (Blue) and [C] (Clear) are not available when a mammography media tray is installed in supply tray 3.)
Sorter Use	Select whether to use the sorter. This is not displayed when the sorter is not installed.

# 1

**Enable maintenance mode.**



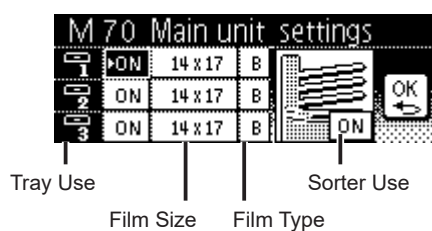
“3.6.1 Enabling and Using Maintenance Mode” (page 54)

# 2

Use the [Test print] and [Calibration] buttons to move the cursor to the [Main Unit Settings] icon . Press the [Service/Enter] button to select the item.

# 3

The following message appears in the display window.



## 4 Use the [Test print] and [Calibration] buttons to move the cursor to an item, and press the [Service/Enter] button to select and set that item. Press a tray button to move the cursor to the [Tray Use] icon for the selected tray.

The selected setting changes in the following order:

[Tray 1: Tray Use] → [Tray 1: Film Size] → [Tray 1: Film Type] →  
 [Tray 2: Tray Use] → [Tray 2: Film Size] → [Tray 2: Film Type] →  
 [Tray 3: Tray Use] → [Tray 3: Film Size] → [Tray 3: Film Type] →  
 [Sorter Use] → [OK] → [Tray 1: Tray Use] •••

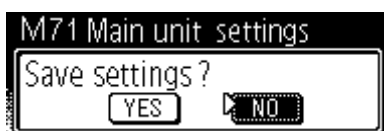
- [Tray Use]  
 Press the [Service/Enter] button to enable or disable the selected tray.  
 [ON] → [OFF] → [ON] •••
- [Film Size]  
 Press the [Service/Enter] button to change the film size of the selected tray.  
 [14x17] → [14x14] → [11x14] → [10x12] → [8x10] → [14x17] → •••
- [Film Type]  
 Press the [Service/Enter] button to change the film type of the selected tray.  
 [B] → [C] → [M] → •••
- [Sorter Use]  
 Press the [Service/Enter] button to enable or disable the sorter.  
 [ON] → [OFF] → [ON] → •••

## 5 Move the cursor to [OK] and press the [Service/Enter] button to save the settings.

(If the following message appears, the settings were not saved properly. In this case, shut down the main unit, restart it, and then configure the settings again.)



## 6 When the [Reset/Cancel] button is pressed after changing the settings, a save confirmation message appears.



**7** Use the [Test print] and [Calibration] buttons to move the cursor to [YES] or [NO].

**8** Press the [Service/Enter] button to select the item.

Select [YES] to save the settings. The maintenance menu appears.

Select [NO] to return to the maintenance menu without saving the settings.



- When changes are made to the main unit settings, the main unit disconnects from and then reconnects to PC to update the settings.
- A message indicating that the main unit will disconnect from the computer may appear in the display window. This is not a malfunction. The main unit quickly re-establishes a connection.

### 3.6.10 Current Date & Time

You can set the year, month, day, hour, and minute of the main unit and PC.

**1** Enable maintenance mode.



"3.6.1 Enabling and Using Maintenance Mode" (page 54)

**2** Use the [Test print] and [Calibration] buttons to move the cursor to the [Current Date & Time] icon . Press the [Service/Enter] button to select the item.

**3** The following message appears in the display window.



**4** Use the [Test print] and [Calibration] buttons to move the cursor.

The selected setting changes in the following order.

[YEAR] → [MONTH] → [DAY] → [HOUR] → [MIN] → [OK] → [YEAR] ...

## 5

**Press the [Service/Enter] button to select the item.**

- [YEAR]

Press the [Service/Enter] button to select the year.

[08] → [09] → ... → [36] → [37] → [08] → ...

- [MONTH]

Press the [Service/Enter] button to select the month.

[01] → [02] → ... → [11] → [12] → [01] → ...

- [DAY]

Press the [Service/Enter] button to select the day.

[01] → [02] → ... → [30] → [31] → [01] → ...

(For months with less than 31 days, you can only select up to the last day of the month.)

- [HOUR]

Press the [Service/Enter] button to select the hour.

[01] → [02] → ... → [11] → [12] → [01] → ...

- [MIN]

Press the [Service/Enter] button to select the minutes.

[00] → [01] → ... → [58] → [59] → [00] → ...

## 6

**Move the cursor to [OK] and press the [Service/Enter] button to save the settings.**

(If the date and time format changes according to the settings of PC, the date and time is displayed in a format that differs from the above setting.)

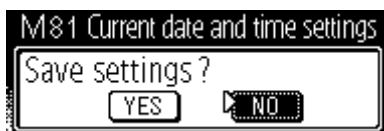
Example: 12/25 '07 PM 12:39

(You may not be able to set the time from the main unit depending on the environment of PC. If the following message appears, set the time on PC.)



## 7

**When the [Reset/Cancel] button is pressed after changing the settings, a save confirmation message appears.**



- 8** If you save the settings, the following screen may be displayed and the film count (Film Processing Amount) may be lost depending on the date change. Confirm the count under Film Processing Amount before changing the date.

 "3.6.4 Film Processing Amount" (page 57)



- 9** Use the [Test print] and [Calibration] buttons to move the cursor to [YES] or [NO].



- 10** Press the [Service/Enter] button to select the item.  
Select [YES] to save the settings. The maintenance menu appears.  
Select [NO] to return to the maintenance menu without saving the settings.

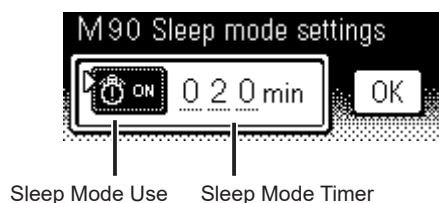


- The date and time setting may not be available depending on the setting of PC.
- The date can be set up to December 31, 2037.

### 3.6.11 Sleep Mode Setting

You can configure the sleep mode setting of the main unit. You can turn the sleep mode on or off and set the sleep mode timer.

- 1** Enable maintenance mode.  
 "3.6.1 Enabling and Using Maintenance Mode" (page 54)
- 2** Use the [Test print] and [Calibration] buttons to move the cursor to the [Sleep Mode Setting] icon . Press the [Service/Enter] button to select the item.
- 3** The following message appears in the display window.



## 4 Use the [Test print] and [Calibration] buttons to move the cursor.

The selected setting changes in the following order.

[Sleep Mode Use] → [Sleep Mode Timer] ([Digit 1] → [Digit 2] → [Digit 3]) →  
[OK] → [Sleep Mode Use] → •••

## 5 Press the [Service/Enter] button to select the item.

- [Sleep Mode Use]

Press the [Service/Enter] button to enable or disable the sleep mode.

[ON] → [OFF] → [ON] → •••

- [Sleep Mode Timer]

Press the [Service/Enter] button to set the number of minutes until the sleep mode is activated. Select a number from [0] to [9] for each of the three digits.

[0] → [1] → ••• [8] → [9] → [0]

Set this between 20 and 720 minutes.

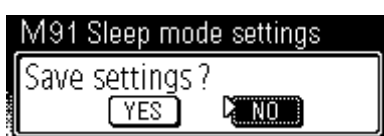
You cannot set to less than 20 minutes or more than 720 minutes.

## 6 Move the cursor to [OK] and press the [Service/Enter] button to save the settings.

(If the following message appears, the settings were not saved properly. In this case, shut down the main unit, restart it, and then configure the settings again.)



## 7 When the [Reset/Cancel] button is pressed after changing the settings, a save confirmation message appears.



## 8 Use the [Test print] and [Calibration] buttons to move the cursor to [YES] or [NO].

## 9 Press the [Service/Enter] button to select the item.

Select [YES] to save the settings. The maintenance menu appears.

Select [NO] to return to the maintenance menu without saving the settings.

### 3.6.12 Network Information

This displays the network information for the main unit and the connected PC.

( If PC is not connected, the PC information is not displayed.)

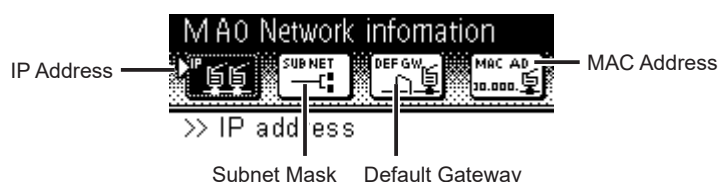
#### 1 Enable maintenance mode.



"3.6.1 Enabling and Using Maintenance Mode" (page 54)

#### 2 Use the [Test print] and [Calibration] buttons to move the cursor to the [Network Information] icon . Press the [Service/Enter] button to select the item.

#### 3 The following message appears in the display window.



#### 4 Use the [Test print] and [Calibration] buttons to move the cursor to an item, and press the [Service/Enter] button to select that item. Press the [Reset/Cancel] button to return to the network information menu.

##### • [IP Address]

Press the [Service/Enter] button to display the IP address.



The top IP address is that of the main unit, and the bottom IP address is that of the connected PC.



• If PC is not connected, the PC's IP address is not displayed.

##### • [Subnet Mask]

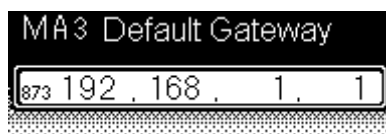
Press the [Service/Enter] button to display the subnet mask.



The subnet mask of the main unit is displayed.

- [Default Gateway]

Press the [Service/Enter] button to display the default gateway.



The default gateway of the main unit is displayed.

- [MAC Address]

Press the [Service/Enter] button to display the MAC address.



The top MAC Address is that of the main unit, and the bottom MAC Address is that of the connected PC.



• If PC is not connected, the PC's MAC address is not displayed.

### 3.6.13 Service Information

This displays the serial number, running time, total number of output sheets, and version information of the main unit.


**1**

**Enable maintenance mode.**



"3.6.1 Enabling and Using Maintenance Mode" (page 54)

**2**

Use the [Test print] and [Calibration] buttons to move the cursor to the [Service Information] icon . Press the [Service/Enter] button to select an item.

**3**

The following message appears in the display window.



Display Item	Meaning
Serial Number	Displays the serial number of the main unit.
Software Version	Displays the software version of the main unit.
Total Running Time	Displays the total running time of the main unit in minutes.
Total Number of Output Sheets	Displays the total number of sheets output by the main unit. This includes the number of calibration sheets output at the time of setup.

**4**

Press the [Reset/Cancel] button to return to the maintenance menu.

## 3.7 Film Related Settings

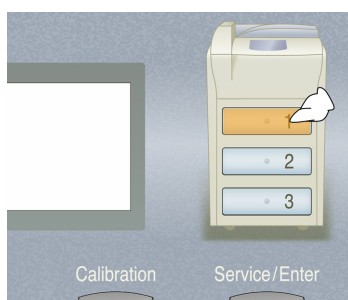
You can change the film size or type settings from the DRYPRO 873 operation panel.

### 3.7.1 Changing the Film Size from the Operation Panel

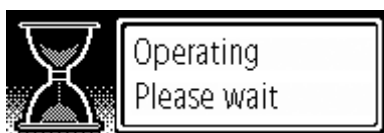


- When changing film-related settings, make sure there are no films in the supply tray of which you want to change the settings. After changing settings in the operation panel, you need to change the settings of the supply tray unit.
- When you want to change the film size to 10x12 or 8x10, or from 10x12 or 8x10 to a different size, the settings of some mechanical parts need to be changed. Contact Konica Minolta technical representatives.
- If you change the film size with items remaining in the queue, E9211 error will occur as many times as the number of items in job. When changing the settings, make sure there is nothing left in the job.

- 1** Empty the film from the supply tray.
- 2** In maintenance mode, use [Main Unit Settings] to set [Film Size] and [Film Type].
- 3** Press the Tray button.



The following message appears in the display window.





• **In the following cases, the supply tray will not open.**

- When films are being printed  
“Please wait a while” is displayed, and the supply tray opens when printing has completed.
- When a different user is logged in from PC etc,  
press the [Service/Enter] button once again after that user has logged out.



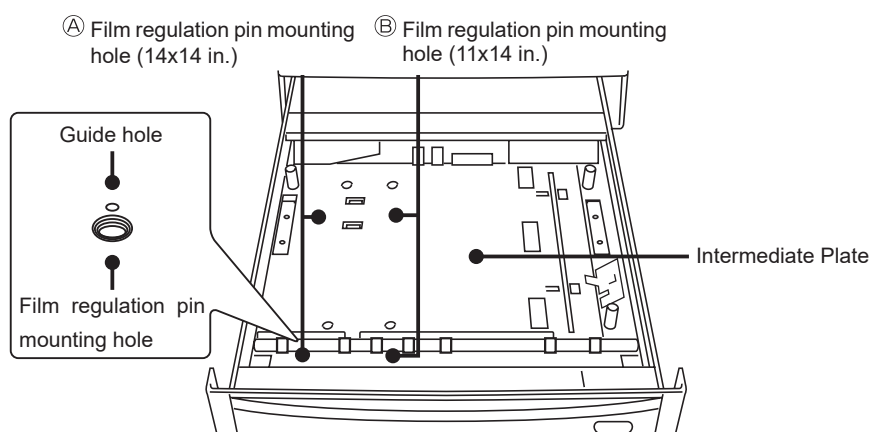
- The film size and type are displayed as values set for the target tray.

**4**

**If there are films or paper trays inside the supply tray, remove them.**

**5**

**Check the attachment position of the film regulation pin.**



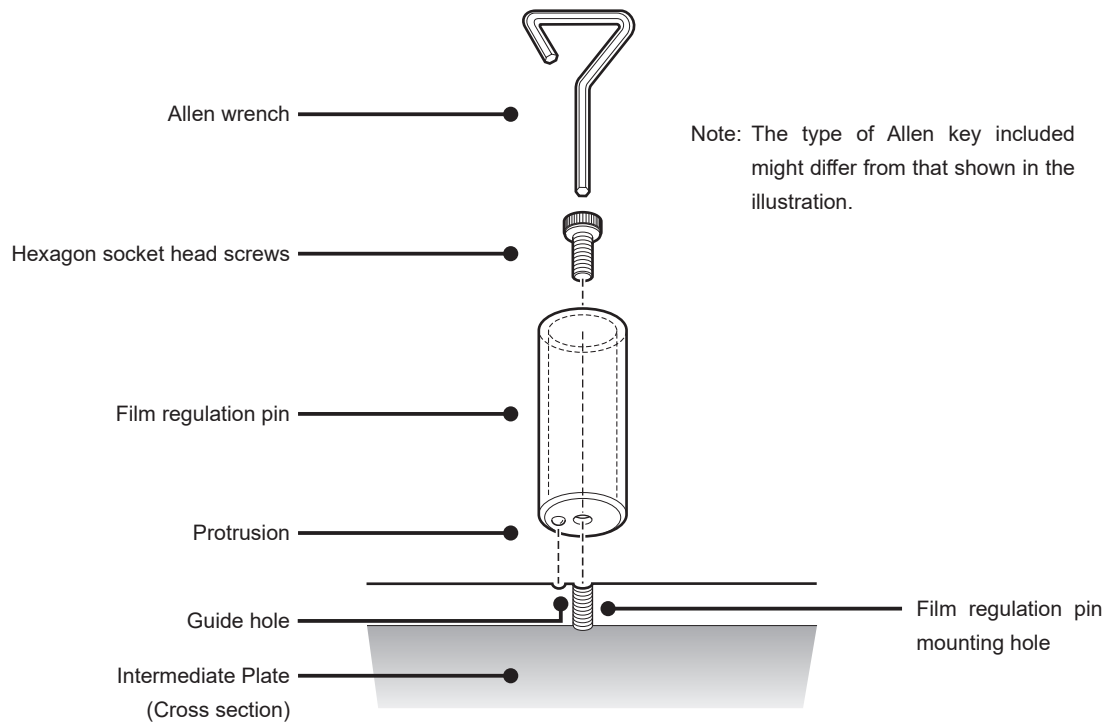
Size of film to be used	Attachment position of film regulation pin
14x17 in.	None (film regulation pin is not used)
14x14 in.	A
11x14 in.	B



- **Do not place objects on the supply tray or lean on the supply tray when it is pulled out. Failure to do so could cause fault.**
- **Do not leave allen keys, film regulation pins, screws, or other items inside the supply tray. Doing so could cause a failure.**
- **The film regulation pins in the four corners of the supply tray are fixed in place and cannot be changed.**

### When changing from 14x17 inch to 14x14 inch or 11x14 inch

- 6** Use the supplied allen key to attach the film regulation pins to the specified locations (2 locations) with the hexagonal-socket screws. At this time, line up the protrusion on the base of the film regulation pin with the guide hole on the intermediate plate.



### When changing from 14x14 inch or 11x14 inch to 14x17 inch

- 7** Use the supplied allen key to remove the film regulation pins (2 pins) for the 14x14 inch or 11x14 inch films.



- Be careful not to leave the film regulation pins (2 pins) or hexagonal-socket screws (2 screws) inside the supply tray, and make sure you do not lose them.

- 8** Follow the steps from step 5 onwards, referring to [3.3 Loading Films] (p.45) when loading films.

When "Ready" appears in the display window, the machine is ready to print.

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# **Chapter 4**

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## **Troubleshooting**

## 4.1 Need Help?

If there are signs of failure, check in accordance with the following table. See also the appropriate page. If there is no improvement in symptoms, contact Konica Minolta technical representatives.

Problem	Items to be checked	Refer to
Power is not turned on	Did you press the operation switch until a beep sounds (approximately one second)? Did you press the operation switch twice? Is the power supply circuit breaker turned on? If you shut down by holding down the operation switch for 10 seconds, did you turn off the power supply circuit breaker once after that, and then turn it on? Is the power supply of the outlet normal?	3.1.1 How to Start (page 36)
Not printing	Is an error message displayed in the display window? Did the "PC not connected" message appear or was the power interrupted during printing? If this occurs, part of the job may not be printed. Check the output print and print again if necessary.	4.3 Error Display and Solutions (page 80)
Film jam occurred	Identify the section where a film jam occurred.	4.5 How to Clear a Film Jam (page 85)
Cannot shut down	Did you press the operation switch until a beep sounds (approximately one second)? Did you hold down the operation switch for 10 seconds?	3.1.3 How to Shut Down (page 38)
Cannot open trays when loading a film	Is the main unit printing something? Is the another user logged in for maintenance?	3.3 Loading Films (page 44)
An error message is displayed	Check the error message.	4.3 Error Display and Solutions (page 80)
The diagnostic image is not output	Is [E9211] displayed in the message display window?	4.3 Error Display and Solutions (page 80)
Cannot communicate with PC	Is the message "PC not connected" displayed in the display window? Check the following items. If you are unsure where to check, contact your Konica Minolta technical representatives. 1. Check that the Ethernet cable is connected properly between DRYPRO 873 and PC. If it is not connected properly, connect the cable. 2. Check that the hub connected to DRYPRO 873 and PC is operating properly by checking the LED lights on the front of the hub. If the LED lights are off or the hub is not working, replace the hub. 3. Check that the Ethernet cable is connected properly to the hub. If it is not connected properly, connect the cable. 4. Check that the Ethernet LED indicator on DRYPRO 873 is lit or blinking. If the indicator is off, contact your Konica Minolta technical representatives. 5. There may be a problem with PC. Take the action described in "4.4 How to Clear Errors" for resolving an F8700 error. If the error recurs, contact your Konica Minolta technical representatives.	2.2.4 Interior (page 30)

## 4.2 How to Resolve Film Loading Error

When a film loading error occurs, perform the following actions.

### Actions to take when the following erroneous operation is performed

- Closed the tray without pulling out the forward end of the package (barrier bag).
- Closed the tray without installing films.

Film loading finishes, but the remaining amount of film indicator continues to show "0", the tray icon continues to flash, and the tray button remains lit.

Perform the procedure again from the step 1 of "3.3 Loading Films" (page 44).

- Closed the tray without cutting off the back of the package (barrier bag) with a cutter.

Pressing the lit tray button displays the following message in the display window.




When the [Test print] button or the [Calibration] button is pressed, [YES] is selected, and the [Service/Enter] button is pressed, the tray pops out. So perform the procedure from the step 7 of "3.3 Loading Films" (page 44).




## 4.3 Error Display and Solutions

When an error occurs, the error message and solutions are displayed in the message display window on the operation panel.

### 4.3.1 Display and Solutions on Operation Panel

The following describes the error messages that may appear in the display window on the operation panel and suggested solutions.

Error Type	Display Message Example	Description of Error	Solutions
C error	Cxxxx Caution	Minor error	There is no need to deal with it.
E error	E4125: <Error message> Close the Tray	Supply tray 1 opens when film is not being loaded	Close the supply tray 1.
	E4225: <Error message> Close the Tray	Supply tray 2 opens when film is not being loaded	Close the supply tray 2.
	E4325: <Error message> Close the Tray	Supply tray 3 opens when film is not being loaded	Close the supply tray 3.
	E4211, E4410, E4411, E4412, E4510, E4511, E4512, E4522, E4610, E4611: <Error message> Open the Front Cover	Film jam	Remove the stuck film.  "4.5 How to Clear a Film Jam" (page 85)
	E4311: <Error message> Open the Lower Right Cover		
	E4511, E4610, E4611 (when the sorter is installed)		
	E4712: <Error message> Open the Front Cover and Sorter Cover		
	E4A20: <Error message> Close the cover	The front cover is opened during operation.	Close the front cover.

Error Type	Display Message Example	Description of Error	Solutions
E error	E4A21: <Error message> Close the cover	The top right cover is opened during operation.	Close the top right cover.
	E4A22, E4A24: <Error message> Close the cover	The lower right cover is opened during operation.	Close the lower right cover.
	E4A23: <Error message> Close the cover	The sorter cover is opened during operation.	Close the sorter cover.
	Exxxx: <Error message> Press Reset button	Error other than film jam	Check the error description, perform the suggested solution, and then press the [Reset/Cancel] button.  "4.4.1 Reset from Operation Panel" (page 82)
	E9211: <Error message> Press Reset button	The entered image film size/type is incorrect (occurs when an item in queue remains and the film size or type is changed on the main unit operation panel.)	A film size/type input image that differs from the main unit settings was specified. Check the film size/type settings for the input destination modality, and press the [Reset/Cancel] button.  "4.4.1 Reset from Operation Panel" (page 82)
F error	Fxxxx: <Error message> Turn OFF the power	Internal error	Press the operation switch until a beep sounds (approximately one second) and shut down this machine. Check that the machine has been shut down and then press and hold the operation switch until a beep sounds (approximately one second), to restart the machine.  "4.4.1 Reset from Operation Panel" (page 82)
	F8700: <Error message> Reboot the PC referring to the manual	There may be a problem with PC.	Take the action described in "When an F8700 Error Occurs" (page 83).
	Fxxxx: <Error message> PC Application Error	There may be a problem with PC.	Take the action described in "When a PC Application Error Occurs" (page 83).

Note: "xxxx" indicates the notation in hexadecimal (0 to 9 or A to F).

## 4.4 How to Clear Errors

This section describes how to clear (reset) errors.

When the message “Film empty”, “Film jam”, or “Filter exchange” is displayed, perform necessary operation.



“3.3 Loading Films” (page 44)

“4.5 How to Clear a Film Jam” (page 85)

“5.4 Changing Deodorant Filter” (page 109)

If the error persists even after coping with the error as mentioned below, contact Konica Minolta technical representatives. To ensure prompt and effective support, please provide the error code and error message displayed in the display window as well as a description of the problem.

### 4.4.1 Reset from Operation Panel

When an error occurs in DRYPRO 873, the error message appears in the message display window on the operation panel. In addition, the [Reset/Cancel] lamp lights up and the red status lamp illuminates. After handling the error according to the error message, reset the error display.

#### Error Message Starting with “E” (other than film jam, cover, and tray)

When the [Reset/Cancel] button is pressed, the message "Operating Please wait" is displayed.

Once the error has been successfully reset, "Ready" appears in the message display window and the machine is ready to print.

#### Error Message Starting with “E”(cover and tray errors)

If a cover opens during operation or a tray opens other than when loading film, the error is reset automatically, and the message "Operating Please wait" is displayed once the cover or the tray is closed.

Once the error has been successfully reset, "Ready" appears in the message display window and the machine is ready to print.

## Error Message Starting with “F”

When the error message starting with “F” is displayed, shut down DRYPRO 873 once and then restart it. If DRYPRO 873 becomes inoperable due to some causes, restart DRYPRO 873.

To restart DRYPRO 873, perform the following steps.

- 1 Press the operation switch until a beep sounds (approximately one second).**

The message "Now shutting down Please wait a while" appears in the display window, and the status LED flashes.

The machine will be shut down in about 10 seconds.

- 2 Check that the machine has been shut down and then press and hold the operation switch until a beep sounds (approximately one second).**

When "Ready" appears in the display window after starting up the main unit, the machine is ready to print.

## When a PC Application Error Occurs

From the maintenance menu of the operation panel, enter the password and perform the system reset described on the second screen.



 “3.6.1 Enabling and Using Maintenance Mode” (page 54)

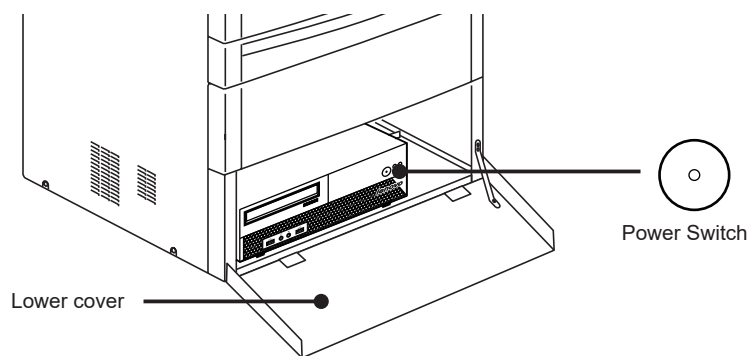


- If an error occurs, contact your Konica Minolta technical representatives.

## When an F8700 Error Occurs

There may be a problem with PC.

- 1 If PC is stored below the main unit, open the lower cover, and press the power switch for one second.**



PC shuts down and the power LED turns off for 30 seconds to 1 minute.



Power LED

## 2 When the power LED turns off, press the power switch again to start PC.



- .....
- If an error occurs, contact your Konica Minolta technical representatives.
  - If PC is not stored below the main unit but the screen is visible on the monitor, use the normal procedure to restart or shut down PC.
- .....

## 4.5 How to Clear a Film Jam

When a film jam error occurs, the error code, error status, and solutions are displayed in the message display window on the operation panel.



### 4.5.1 Film Jam Between the Supply tray 1 and 2 and the Position Regulation Unit

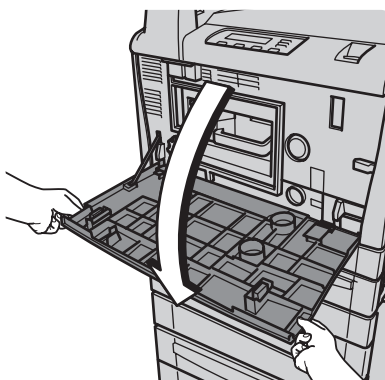
Error code 4211, 4410, 4411, 4412, 4510, 4522 or 4512 is displayed. (Error code 4211 is only displayed when supply tray 3 is not set.)

When a film jam has occurred between the Supply tray 1 and 2 and the position regulation unit, remove the film, following the steps below.

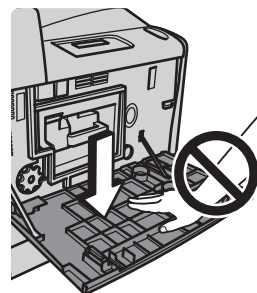
- 1** A description of the step to be taken appears in the display window.



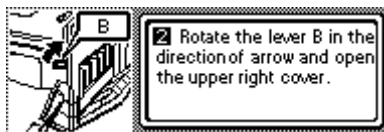
- 2** Open the front cover.



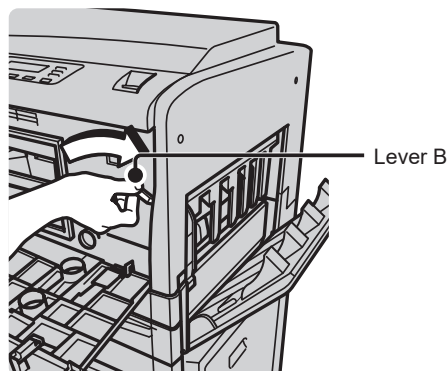
- Do not push down the open front cover or place an object on it. Failure to observe this caution may cause damage to the front cover.



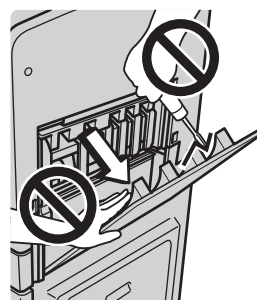
- 3** When the cursor indicators light up, press the [Test print] button or the [Calibration] button to display the next step to be taken in the display window.



- 4** Rotate lever B in the direction of the arrow, and open the top right cover.



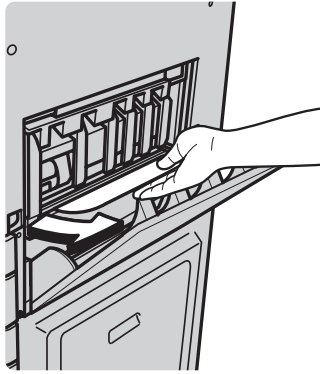
- Do not push down the open top right cover or place an object on it. Failure to observe this caution may cause damage to the top right cover.
- Do not scratch the inside of the top right cover. It can cause film to be damaged.



- 5** When the cursor indicators light up, use the [Test print] and [Calibration] buttons to display the next step to be taken in the display window.



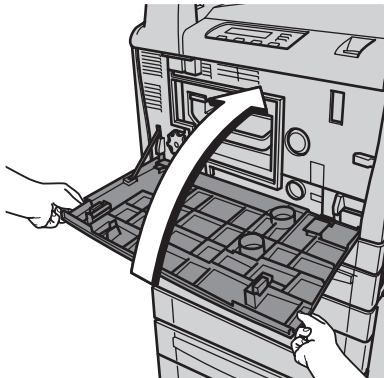
## 6 Remove the film.



## 7 When the cursor indicators light up, press the [Test print] button or the [Calibration] button to display the next step to be taken in the display window.



## 8 Close all covers.



Once the film jam has been cleared, the machine will automatically return to the Ready state.



- When closing the front cover, check that two magnets at the top edge of the front cover are placed in the correct position on the main unit.

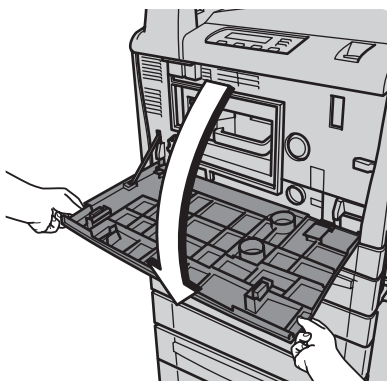
## 4.5.2 Film Jam in Heat Process Unit

Error code 4511, 4610, or 4611 is displayed. (but only when the sorter is not mechanically installed.)  
When a film jam has occurred in the heat process unit, remove the film, following the steps below.

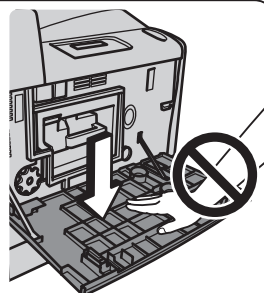
- 1** A description of the step to be taken appears in the display window.



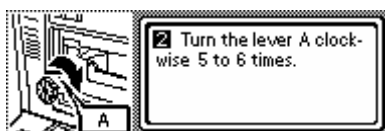
- 2** Open the front cover.



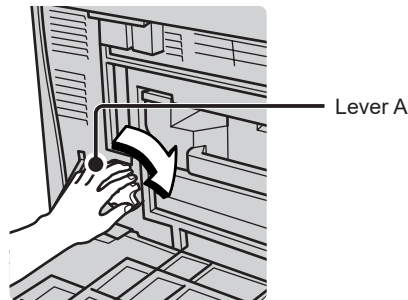
- Do not push down the open front cover or place an object on it. Failure to observe this caution may cause damage to the front cover.



- 3** When the cursor indicators light up, press the [Test print] button or the [Calibration] button to display the next step to be taken in the display window.



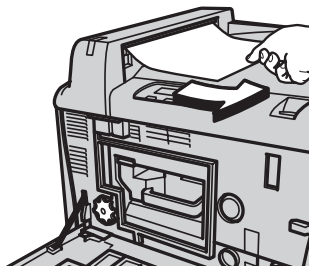
- 4** Rotate lever A in the direction of the arrow until the film no longer comes out of the supply tray.



- 5** When the cursor indicators light up, press the [Test print] button or the [Calibration] button to display the next step to be taken in the display window.



- 6** Remove the film from the film ejection port.

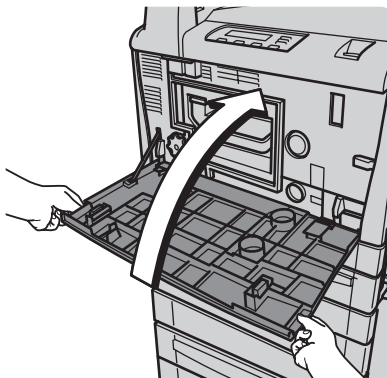


- When the film is not ejected out of the ejection port after rotating lever A five to six times, go to step 8. After completion of clearing the film jam, if the error message is displayed, handle the error. If the same error persists, contact Konica Minolta technical representatives.

- 7** When the cursor indicators light up, press the [Test print] button or the [Calibration] button to display the next step to be taken in the display window.



## 8 Close the front cover.



Once the film jam has been cleared, the machine will automatically return to the Ready state.



- When closing the front cover, check that two magnets at the top edge of the front cover are placed in the correct position on the main unit.

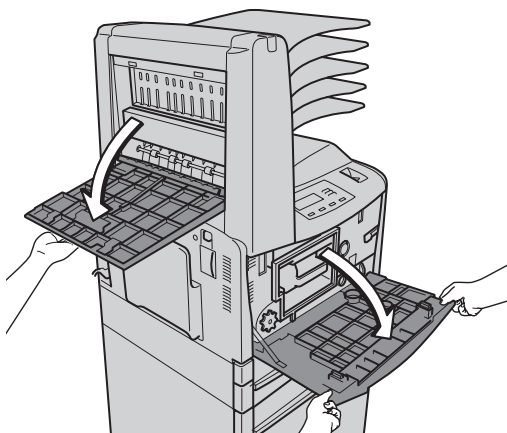
### 4.5.3 Film Jam in the Sorter Unit (optional)

Error code 4511, 4610, 4611, or 4712 is displayed. (Error codes 4511, 4610, and 4611 are only displayed when the sorter[optional] is mechanically installed.)

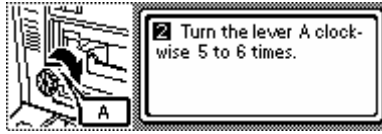
#### 1 A description of the step to be taken appears in the display window.



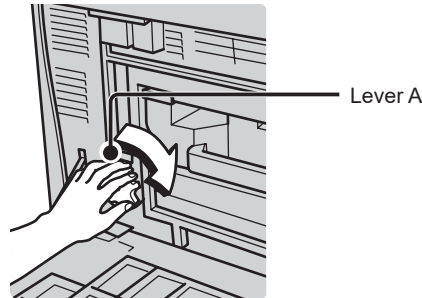
#### 2 Open the front cover and sorter cover.



- 3** When the cursor indicators light up, press the [Test print] button or the [Calibration] button to display the next step to be taken in the display window.



- 4** Rotate lever A in the direction of the arrow until the film no longer comes out of the supply tray.

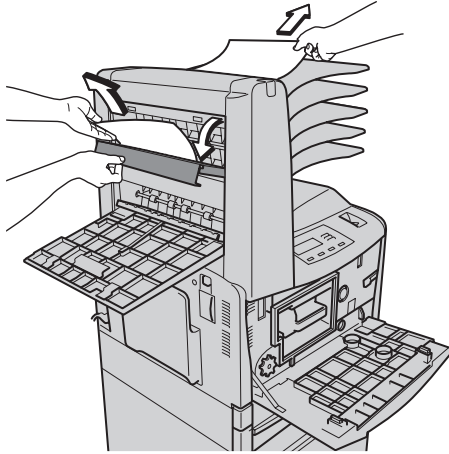


- When the film is not ejected out of the ejection port after rotating lever A five to six times, go to step 8. After completion of clearing the film jam, if the error message is displayed, handle the error. If the same error persists, contact Konica Minolta technical representatives.

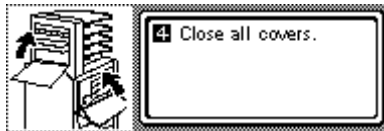
- 5** When the cursor indicators light up, press the [Test print] button or the [Calibration] button to display the next step to be taken in the display window.



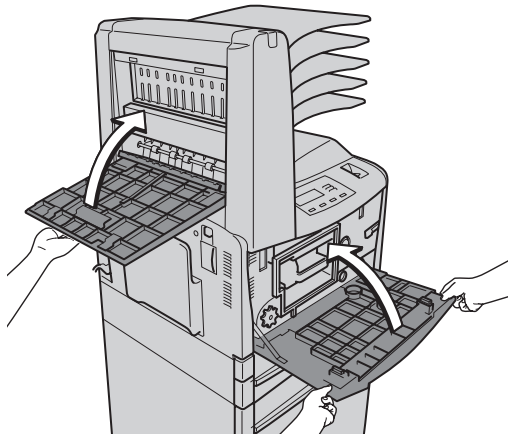
- 6** Remove the film from the film ejection port, or open the guide and remove the film.



- 7** When the cursor indicators light up, press the [Test print] button or the [Calibration] button to display the next step to be taken in the display window.



- 8** Close all covers.



- When closing the front cover and sorter cover, make sure that the two magnets at the top edge of the cover come in contact with the correct position on the main unit.

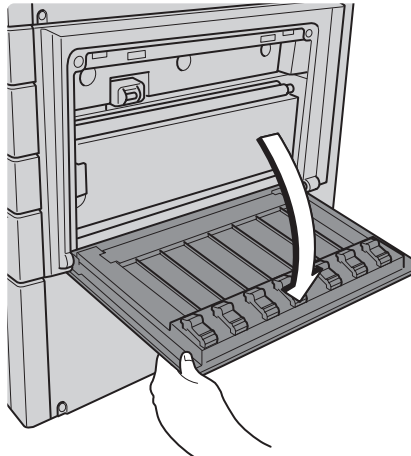
#### 4.5.4 Film Jam from Supply tray 3[optional] (Elevating Transportation Unit)

Error code 4311 is displayed.

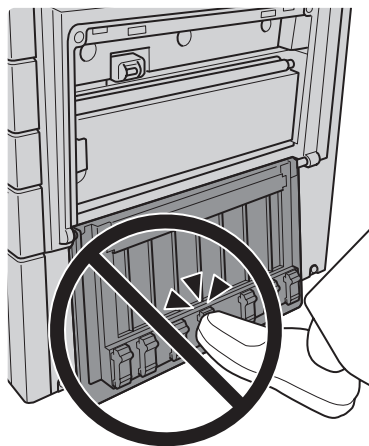
- 1** A description of the step to be taken appears in the display window.



- 2** Open the lower right cover.



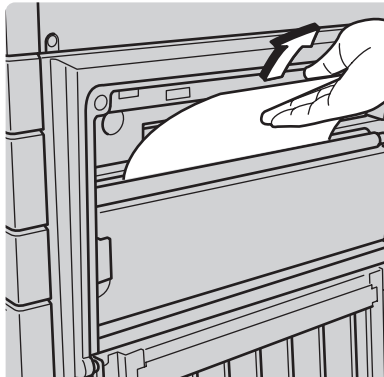
- Do not push down the open lower right cover or place objects on it, as this may damage the lower right cover.
- Be careful not to damage the inside of the lower right cover, as this can damage the film.



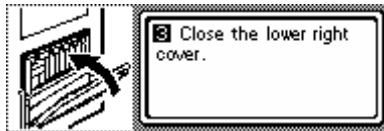
- 3** When the cursor indicators light up, press the [Test print] button or the [Calibration] button to display the next step to be taken in the display window.



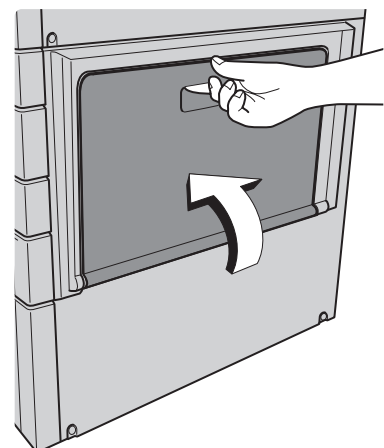
- 4** Remove the film from the elevating transportation unit.



- 5** When the cursor indicators light up, press the [Test print] button or the [Calibration] button to display the next step to be taken in the display window.



- 6** Close the lower right cover.





- When closing the lower right cover, make sure that the two magnets at the top edge of the lower right cover come in contact with the correct position on the main unit.

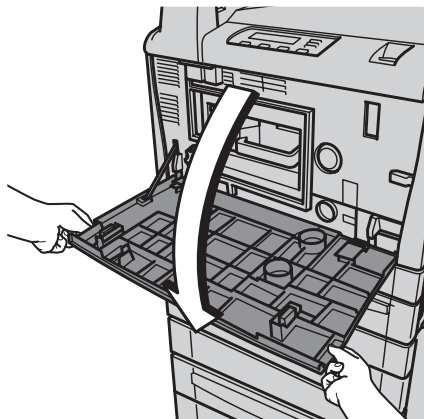
#### 4.5.5 Film Jam from Supply tray 3[optional] (Position Regulation Unit)

Error code 4211 is displayed. (Error codes 4211 only displayed when the supply tray 3[optional] is mechanically installed.)

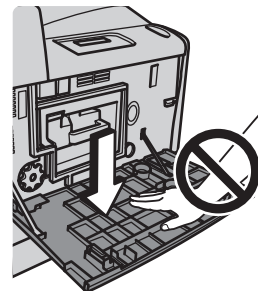
- 1** A description of the step to be taken appears in the display window.



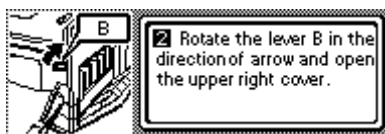
- 2** Open the front cover.



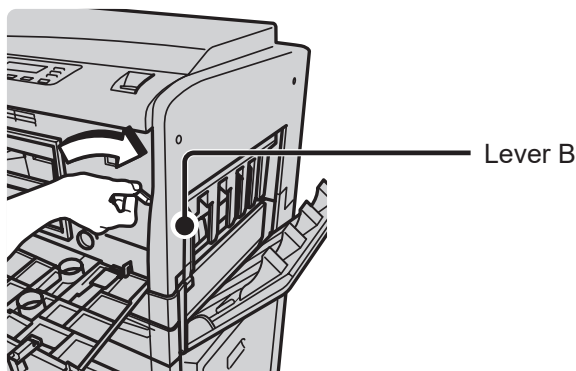
- Do not push down the open front cover or place an object on it. Failure to observe this caution may cause damage to the front cover.



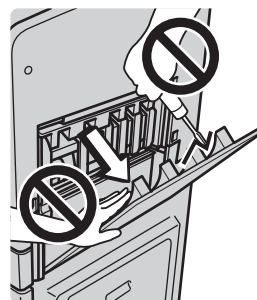
- 3** When the cursor indicators light up, press the [Test print] button or the [Calibration] button to display the next step to be taken in the display window.



- 4** Rotate lever B in the direction of the arrow, and open the top right cover.



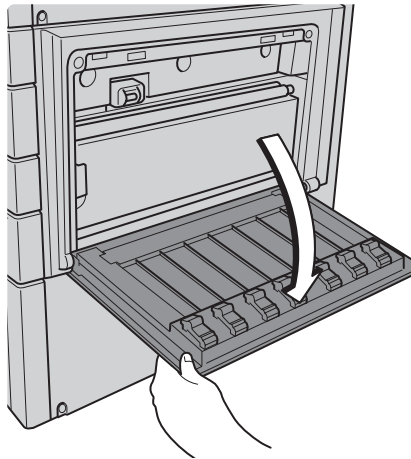
- Do not push down the open top right cover or place objects on it, as this may damage the top right cover.
- Be careful not to damage the inside of the top right cover, as this can damage the film.



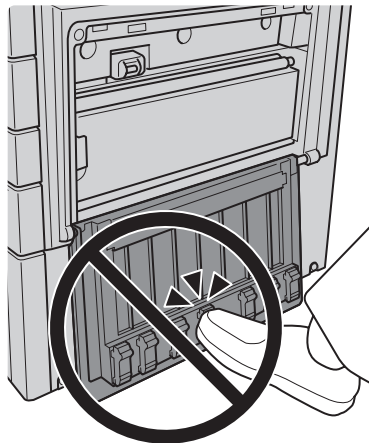
- 5** When the cursor indicators light up, press the [Test print] button or the [Calibration] button to display the next step to be taken in the display window.



## 6 Open the lower right cover.



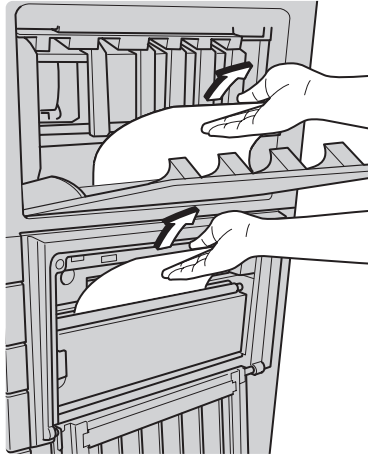
- Do not push down the open lower right cover or place objects on it, as this may damage the lower right cover.
- Be careful not to damage the inside of the lower right cover, as this can damage the film.



## 7 When the cursor indicators light up, press the [Test print] button or the [Calibration] button to display the next step to be taken in the display window.



- 8** Remove the film from the position regulation unit or the elevating transportation unit



- 9** When the cursor indicators light up, press the [Test print] button or the [Calibration] button to display the next step to be taken in the display window.



- 10** Close all covers.



- When closing the front cover, top right cover, and lower right cover, make sure that the two magnets at the top edge of each cover come in contact with the correct position on the main unit.

## 4.6 How to Handle Film Flaws

### How to Handle Film Flaws That Consistently Occur in the Same Position

If flaws consistently occur in the same position on printed film, it may be that foreign matter has been deposited on the feed guides.

In such a case, clean the feed guides with a soft lint-free cloth dampened with ethanol. The feed guides in the following 2 locations must be cleaned.

- Inside the top right cover
- Inside the lower right cover (when an expansion tray or mammography media expansion tray is attached)



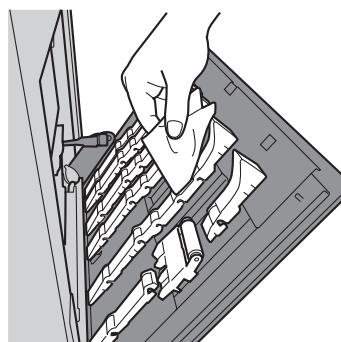
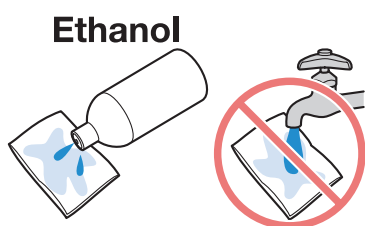
- Wiping the feed guides too harshly may damage them, which in turn would cause more film flaws. Therefore, wipe them carefully.



- If film flaws affecting the interpretation of radiographs persist even after cleaning the feed guides, contact Konica Minolta technical representatives.

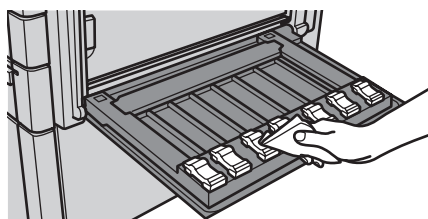
### Cleaning the feed guides inside the top right cover

Open the top right cover, and wipe the guide plate and roller with an ethanol-dampened cloth.



### Cleaning the feed guides inside the lower right cover (when an expansion tray or mammography media expansion tray is attached)

Open the lower right cover, and wipe the guide plate and roller with an ethanol-dampened cloth.



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# **Chapter 5**

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## **Maintenance**

## 5.1 Maintenance, Items to be Checked, and Schedule

This section describes maintenance and items to be checked necessary to ensure use of DRYPRO 873 in optimum condition.

### Maintenance and Items to be Checked by Users

Maintenance and items to be checked by users are as follows: Use the maintenance period as a guide. Perform maintenance as needed depending on usage environment.

Maintenance Period		Weekly	Quarterly	Semiannually
Description of Maintenance Work				
Printing QC patterns and checking QC pattern results	When setting a reference value	Three times in a row		
	In normal times	•		
Cleaning film ejection tray			•	
Cleaning supply tray			•	
Cleaning air intakes/outlets				•
Changing deodorant filter		Every 10,000 prints or every two years		
Cleaning the Cleaning Roller		Every 2,000 prints (mammography media users)		

### Maintenance and Items to be Checked by Service Personnel

Other major maintenance and items to be checked are as follows. These are included in the maintenance contract. For performance of maintenance, contact Konica Minolta technical representatives.

Maintenance Parts		Description	Maintenance Period
Supply unit	Pickup roller	Replacement	Every 50,000 prints
Heat process unit	Opposed rollers (several sets)	Replacement	Every 50,000 prints
	Opposed rollers	Wiping with alcohol	Every 50,000 prints
	Cleaning guide	Wiping with alcohol	Every 50,000 prints
	Heat development drive unit	Replacement	Every 200,000 prints
Sub-scanning unit	Sub-scanning belt	Replacement	Every 200,000 prints
Control box	Air intake filter	Removing dust	Every 50,000 prints
Power supply unit	Air intake filter	Removing dust	Every 50,000 prints

\*Overseas machines equipped with a transformer have filters and thus need cleaning.

## 5.2 Operation of Test Print

This section describes how to operate the test print function necessary to maintain optimum image quality.

### 5.2.1 Outline of Test Print Function

To maintain optimum image quality, the image quality needs to be periodically checked. For this purpose, this machine has the test print function.

When test print is performed, the QC pattern for evaluating the image quality is printed and the density of the QC pattern is measured with the built-in densitometer at the same time and the density is automatically checked. You can check the image quality for problems by visually checking the printed QC patterns. Perform test print for each supply tray. Perform a test print for each supply tray.

### Setting Reference Value

A reference value is required to check the density. For this machine, the average of the first three density values measured when the QC pattern was printed is used as a reference value.

When QC patterns are printed three times with a reference value not set in cases where this machine is used for the first time (installation) or a reference value is reset, a reference value is automatically set. The default set for this machine is used for checking the density when a reference value is not set.



"5.2.2 How to Print QC Patterns" (page 104)

### Resetting Reference Value

In the following cases, a reference value needs to be reset.

- When the film type has been changed
- When QC patterns have not been printed in the last three months or more
- When a week or more has elapsed without printing QC patterns three times at the time of setting a reference value

### Test Print in Normal Times

After completion of setting a reference value, print QC patterns once a week. Make an assessment as to the printed QC patterns by visually checking according to the check list and checking the readouts given by the densitometer built into the main unit. Judge the results of QC patterns as being "OK" or "NG". If the results were judged as being "NG", it needs to be handled as described below.



"5.2.2 How to Print QC Patterns" (page 104)



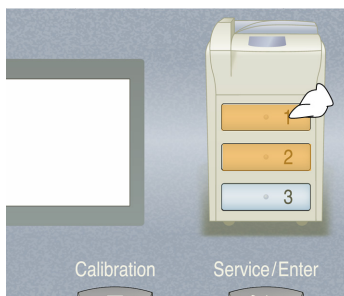
"5.2.3 How to Judge QC Pattern" (page 105)

## 5.2.2 How to Print QC Patterns

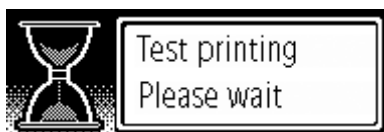
You can print QC patterns from the operation panel of the main unit.

### Printing QC Patterns

- 1** Press the [Test print] button on the operation panel. The tray buttons of the available trays light up.



- 2** Press the tray button of the tray for which to perform a test print. Printing of the test print begins.
- 3** The following message appears when printing of the test print begins.



The QC patterns will be printed.

The normal display ("Ready") appears in the display window.



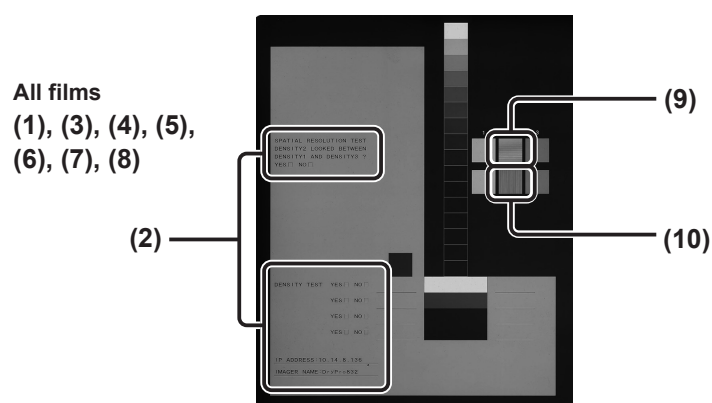
- If the film type of the selected tray is M (Mammo), the calibration pattern and Mammo QC pattern are output on two sheets.

### 5.2.3 How to Judge QC Pattern

When the QC patterns are printed, check the results. Make an assessment as to the printed QC patterns by visually checking according to the items to be checked and readouts given by the densitometer built into the main unit. If any one of the items does not fit, the results are judged as being “NG”. Use the “Test Print Check List” (page 119) in Appendix B.

#### Visual Check of QC Patterns

Check the printed QC patterns according to the items to be checked shown below.



Category	Item Number	Item to be Checked
Image appearance	(1)	“Geometric pattern” as shown is printed
	(2)	“Alphabetic/numeric characters” on the film image can be properly identified
	(3)	No “speckle noise” was created on all or part of the film image
	(4)	No “horizontal stripe” was created on all or part of the film image
	(5)	No “vertical stripe” was created on all or part of the film image
	(6)	No “serious image distortion” was created on all or part of the film image
	(7)	No “image wear” was created on all or part of the film image
	(8)	No “image anomaly” other than items in (3) - (7) occurred on all or part of the film image
Resolution	(9)	The “horizontal thin line” of QC pattern appears to be resolved (A magnifying glass is used)*
	(10)	The “vertical thin line” of QC pattern appears to be resolved (A magnifying glass is used)*

Note \*:Instead of checking with a magnifying glass, if the density is “1 (left)” < “2 (middle)” < “3 (right)”, it is judged as being “OK”.

## Density Check

Check the density value according to the items to be checked shown below.

Category	Item Number	Item to be Checked
Density		Check the display window on the operation panel.
	(11)	After printing the QC pattern, the calibration icon and message are not displayed on the DRY-PRO 873 operation panel
	(12)	After printing the QC pattern, "NG" is not displayed in "1" to "4" of the "QC results" in the QC window on the DRYPRO 873 operation panel, but the correct density value (two to three digits) is displayed

Table 1

Item Number	Item to Be Checked for Film Types B and C	Item to Be Checked for Film Type M
Step 1 density	Within 0.05 of the initial value	Within 0.03 of the initial value
Step 2 density	Within 0.2 of the initial value	Within 0.1 of the initial value
Step 3 density	Within 0.2 of the initial value	Within 0.1 of the initial value
Step 4 density	Within 0.2 of the initial value	Within 0.2 of the initial value



"3.6.5 QC" (page 58)



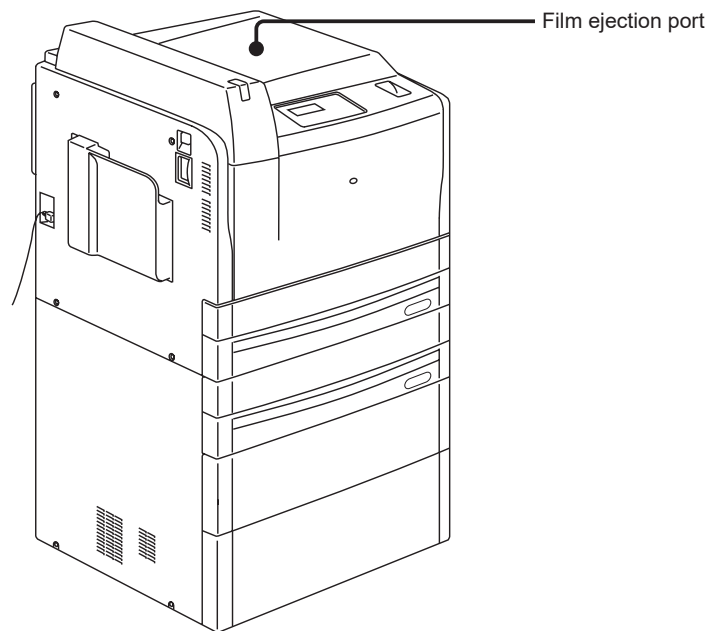
- The method of determining the deviation of the density from the reference varies depending on the film type.  
The density latitude of M (mammography) media is narrower. (See Table 1.)

## 5.3 Cleaning Parts

This section describes the parts that require periodic cleaning.

### 5.3.1 Cleaning Film Ejection Tray

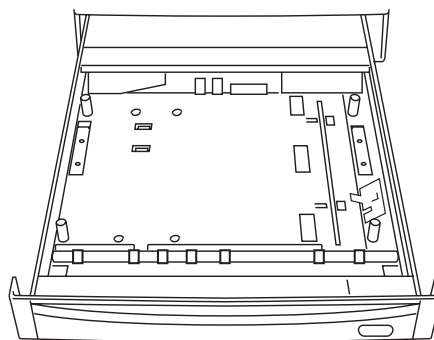
The film ejection tray tends to be dusty. Dust could damage the printed film. Wipe off the dust with dry cloth once every three months.



5

### 5.3.2 Cleaning Supply Tray

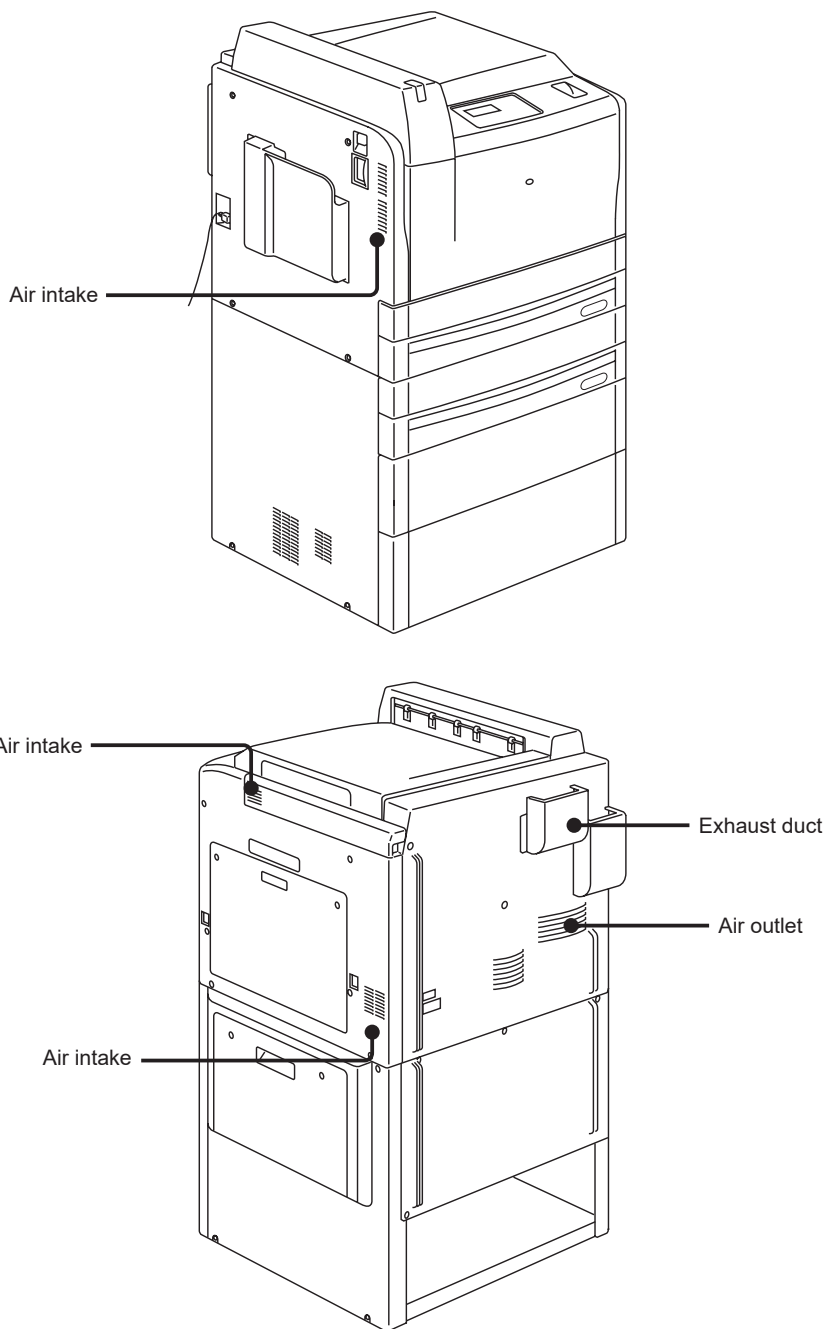
Keep the inside of the supply tray clean. Wipe off the dust with dry cloth or vacuum the dust once every three months.



- When wiping with cloth, be careful not to get injured by a protrusion in the supply tray.


### 5.3.3 Cleaning Air Intakes/Outlets

Vacuum the dust from outer side once every six months to prevent the air intakes and outlets from getting clogged with dust.



### 5.3.4 Cleaning the Cleaning Roller

Please refer to the next section.

 "3.6.7 Roller Cleaning" (page 61)

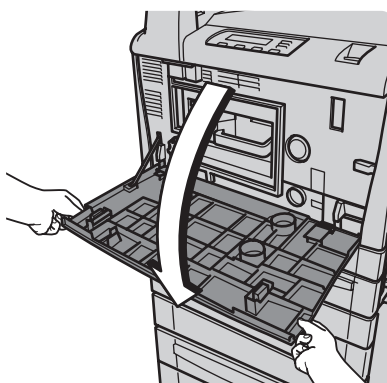
## 5.4 Changing Deodorant Filter

The filter replacement icon is displayed in the operation panel when the main unit reaches 10,000 prints or two years of operation after the last filter replacement.

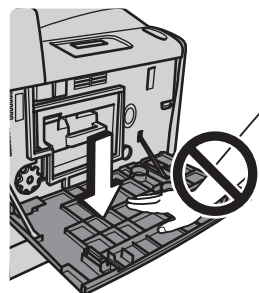


Change the deodorant filter, following the steps below.

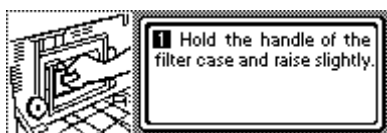
### 1 Open the front cover.



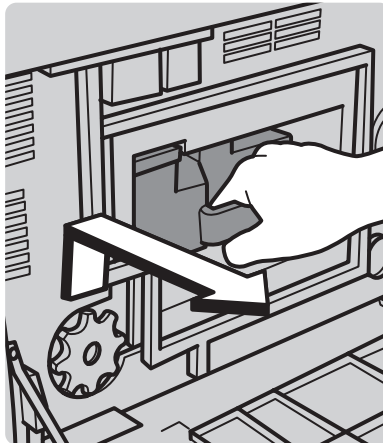
- Do not push down the open front cover or place an object on it. Failure to observe this caution may cause damage to the front cover.



### 2 When the filter replacement icon appears in the display window, opening the front cover displays a description of the steps to replace the filter in the display window.



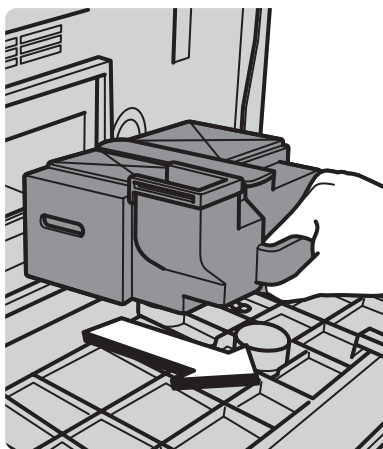
- 3** Lightly lift the handle of the deodorant filter case.



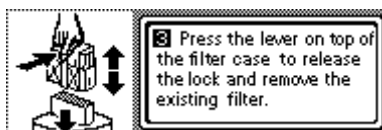
- 4** When the cursor indicators light up, use the [Test print] and [Calibration] buttons to display the next step to be taken in the display window.



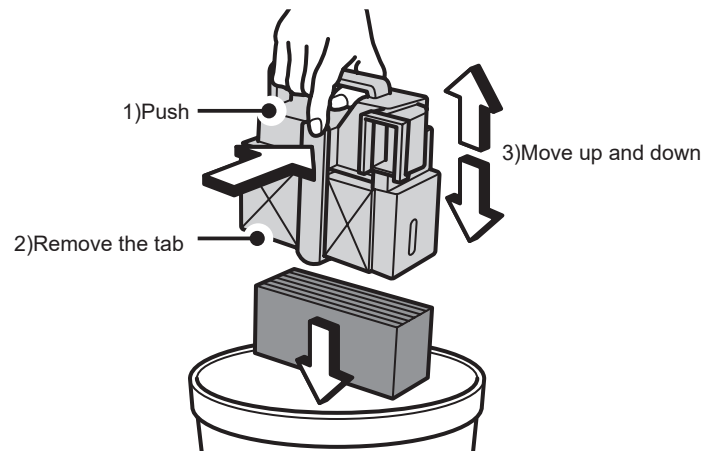
- 5** Pull out the deodorant filter case.



- 6** When the cursor indicators light up, use the [Test print] and [Calibration] buttons to display the next step to be taken in the display window.

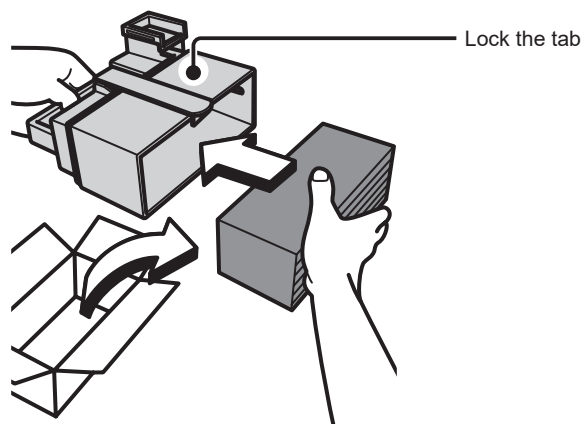


- 7** Press the lever on the top of the filter case to release the lock and then remove the old filter.



- Hold it by the handle, press the tab by pushing the locking lever with your index finger and move it up and down. In this way you can remove the filter without touching it.

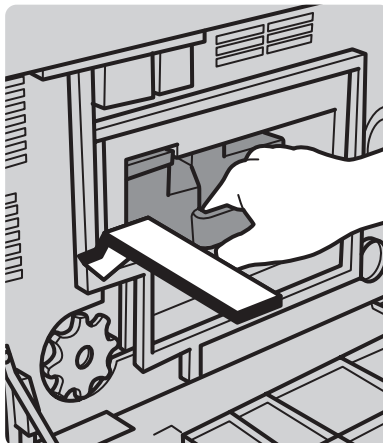
- 8** Have a new deodorant filter ready and install it in the case. Make sure that the tab hitches to the filter and the filter is locked into the case.



- 9** When the cursor indicators light up, use the [Test print] and [Calibration] buttons to display the next step to be taken in the display window.

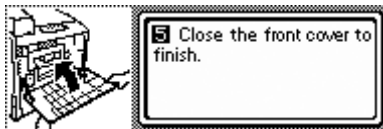


## 10 Install the deodorant filter case in the main unit.

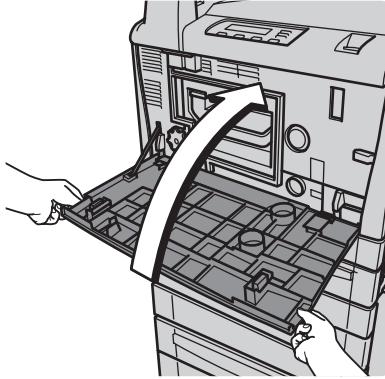


- Push the deodorant filter case as far as it will go, and then push it downward.

## 11 When the cursor indicators light up, use the [Test print] and [Calibration] buttons to display the next step to be taken in the display window.



## 12 Close the front cover.




- When closing the front cover, check that two magnets at the top edge of the front cover are placed in the correct position on the main unit.

Once the front cover has been closed, the machine will automatically go back to the Ready state.

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## 5.5 Roller Cleaning

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When the mammography media expansion tray is installed in supply tray 3 (expansion supply tray), the [Roller Cleaning] icon  appears in the display window after every 2,000 sheets printed. Selecting and activating this item enables cleaning of the cleaning roller. This function can also be used to clean the cleaning roller even if the [Roller Cleaning] icon does not appear in the display window.



“3.6.7 Roller Cleaning” (page 61)

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# Appendix

# A Specifications

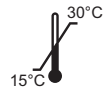
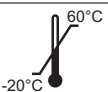
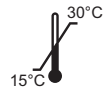
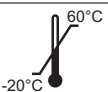
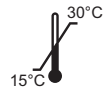
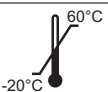

Product Name	DRYPRO MODEL 873														
Type	Dry Laser Imager														
Laser Source	Semiconductor laser														
Usable Film	Medical dry film SD-Q, SD-QC 125-film package (14 × 17 in., 14 × 14 in., 11 × 14 in., 10 × 12 in., and 8 × 10 in. sizes) 50-film package (14 × 17 in. and 10 × 12 in. sizes) (Compatible with DRYPRO 832) SD-QM(exclusive for use with DRYPRO 873)														
Film Size	14 × 17 in. 14 × 14 in. 11 × 14 in. 10 × 12 in. 8 × 10 in.														
Input Interface	Ethernet 1000BASE-T														
Protocol	DICOM Print Management														
Main Memory	256 MB Standard														
Image Memory	Print memory 256 MB														
Processing Capacity	<p>Maximum processing capacity:</p> <p>14 × 17-inch size film: 20-sec. cycle (equivalent to 180 pages per hour) or faster  14 × 14-inch size film: 18-sec. cycle (equivalent to 200 pages per hour) or faster  11 × 14-inch size film: 16-sec. cycle (equivalent to 220 pages per hour) or faster  10 × 12-inch size film: 20-sec. cycle (equivalent to 180 pages per hour) or faster  8 × 10-inch size film: 20-sec. cycle (equivalent to 180 pages per hour) or faster  (Conditions: ambient temperature of 15 to 27°C, input image using REGIUS normal imaging mode, 1 GB Ethernet connection, image size of 78.6 μm (separate specifications for an image size of 43.75 μm))</p> <p>For an image size of 43.75μm:</p> <p>14 × 17-inch size film: 30-sec. cycle (equivalent to 120 pages per hour) or faster  14 × 14-inch size film: 27-sec. cycle (equivalent to 130 pages per hour) or faster  11 × 14-inch size film: 24-sec. cycle (equivalent to 150 pages per hour) or faster  10 × 12-inch size film: 24-sec. cycle (equivalent to 150 pages per hour) or faster  8 × 10-inch size film: 24-sec. cycle (equivalent to 150 pages per hour) or faster  Mammography media specifications: All film sizes: 32-sec. cycle (equivalent to 110 pages per hour) or faster</p>														
Outside Dimension	599 (W) × 1,150 (H) × 585 (D) mm 599 (W) × 1,459 (H) × 585 (D) mm (when the sorter is installed)														
Weight	152kg Optional parts Expansion tray: 15 kg Mammography media tray: 17 kg Sorter: 18 kg														
Power Supply	CE: AC 220 V-240 V ±10 % 50/60 Hz ±1 Hz 6A UL: AC 120 V ±10 % 60 Hz ±1 Hz 10 A														
Heating Value	CE: 1440 KJ/H or less UL: 1320 KJ/H or less														
Operating conditions Temperature / Humidity	<table border="1"> <thead> <tr> <th></th><th colspan="2">Temperature</th><th>Humidity</th></tr> </thead> <tbody> <tr> <td>Operating</td><td>15 to 30 °C</td><td></td><td>30 to 70% RH (No condensation)</td></tr> <tr> <td>Storage and transportation</td><td>-20 to 60 °C</td><td></td><td>20 to 90% RH (No condensation)</td></tr> </tbody> </table>				Temperature		Humidity	Operating	15 to 30 °C		30 to 70% RH (No condensation)	Storage and transportation	-20 to 60 °C		20 to 90% RH (No condensation)
	Temperature		Humidity												
Operating	15 to 30 °C		30 to 70% RH (No condensation)												
Storage and transportation	-20 to 60 °C		20 to 90% RH (No condensation)												
Noise Level	In standby mode: 45 dB or less In print mode: 53 dB or less														
Film Supply	Tray system														
Number of Trays	Three trays maximum (125 sheets/50 sheets per tray) Two trays standard. The third one is optional. For 10 × 12-inch and 8 × 10-inch sizes, select the accessory.														

Image Data Input		8 bits (256 gradations) or 12 bits (4,096 gradations) (depending on the modality image signal)	
Output Gradation		16,384 gradations (14 bits)	
Image Mode		Pixel replication/Function interpolation process	
Pixel Size		78.6 $\mu$ m/43.75 $\mu$ m	
Maximum Resolution (with an image size of 78.6 $\mu$ m)	Film Size	When connected to Regius (pixel)	When connected to unit other than Regius (pixel)
	14 × 17 in.	4,496 × 5,414	4,310 × 5,160
	14 × 14 in.	4,496 × 4,446	4,310 × 4,200
	11 × 14 in.	3,492 × 4,496	3,340 × 4,180
	10 × 12 in.	3,200 × 3,798	3,000 × 3,530
	8 × 10 in.	2,550 × 3,150	2,350 × 2,880
Maximum Resolution (with an image size of 43.75 $\mu$ m)	14 × 17 in.	8,080 × 9,726	7,730 × 9,260
	14 × 14 in.	8,080 × 7,990	7,730 × 7,530
	11 × 14 in.	6,276 × 8,080	6,000 × 7,510
	10 × 12 in.	5,748 × 6,824	5,400 × 6,360
	8 × 10 in.	4,582 × 5,658	4,240 × 5,200
Number of Recorded Frames		1, 2, 4, 6, 8, 9, 12, 15, 16, 20, 24, 25, 30, 35, 36, 42, 48, 54, 56, 60, 63, 64	
Negative/Positive		Available	
Image Cropping Border		Available	
Border		Can be set to black/white	
Stamp		Recorded in one (or two) lines of the film (can be output below or beside the image)	
Density Correction		Incorporated in the main unit	
Remarks		DRYPRO 873 is manufactured in factories certified to meet the requirements of ISO9001:2000, ISO13485: 2003, and EN ISO9001: 2000, EN ISO13485: 2003 quality control standards.	
Accessories		Power cable, two cutters, operation manual, accessories list, deodorant filter, inspection cards, two clamps, film size label, operation sheet, operation manual box, two ducts, shutter, intermediate plate for 10 × 12 in.-size papers, intermediate plate for 8 × 10 in.-size papers, two film regulation pins, two hexagon socket head screws (M3 × 10 mm), Allen wrench, and two stopper covers, four tapping screws (M3 × 8 mm), and CD-ROM, Five screws (M4 × 6 mm), Cable stopper, operation manual for Printlink5-IN.	
Accessories sold separately		Expansion supply tray (accessories are optional) Mammography media expansion tray Sorter	

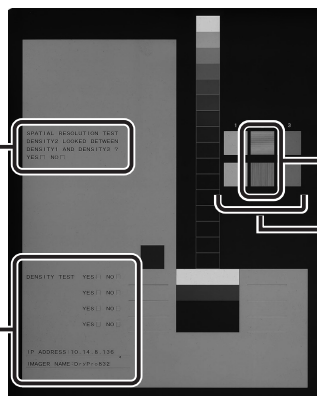
# B Test Print Check List

 "5.2 Operation of Test Print" (page 103)

## Visual Check of QC Pattern (Items to be Checked: (1) to (10))

[Image appearance]

- (1) "Geometric pattern" as shown is printed
- (2) "Alphabetic/numeric characters" can be properly identified
  - None following thing was created on all or part of the film image
- (3) "Speckle noise"
- (4) "Horizontal stripe"
- (5) "Vertical stripe"
- (6) "Serious image distortion"
- (7) "Image wear"
- (8) Other "image anomalies"



[Resolution check]

- Check that thin line is resolved using a magnifying glass
- (9) Horizontal thin line (upper)  
(10) Vertical thin line (lower)
- \* Instead of checking with a magnifying glass, if the density is "1 (left)" < "2 (middle)" < "3 (right)", it is judged as being "OK"

## Density Check (Items to be Checked: (11) and (12))

When checking from the display window on the operation panel

- Current Status View



- (11) "Dens. Error <Perform Calibration>" is not displayed on the DRYPRO 873 operation panel

- QC History View

M31 QC history		1	2	3	4
2008/01/20 10:18		020	120	220	300
2008/01/20 10:17		NG	NG	NG	NG
2008/01/20 10:16		020	120	220	300

- (12) "NG" is not displayed in "1" to "4" of the "QC history" and the correct density value (three digits) is displayed in the QC View

## DRYPRO MODEL 873 Test Print Check List

\* Enter "OK" or "NG" in the "Judgment" column and density value in "( )"

<b>Date and time of implementation</b>		Year   Month   Day (   ) :		<b>Main Unit Name</b>	
<b>Name of a Person in Charge</b>				Tray	Tray 1/Tray 2/Tray 3
Category	Item-Number	Item to be Checked	Judgment*		
			1st	Recheck	
Visual check of QC pattern	Image appearance	(1) "Geometric pattern" is printed			
		(2) Alphabetic/numeric characters on the film image can be properly identified			
		(3) No "speckle noise" was created on all or part of the film image			
		(4) No "horizontal stripe" was created on all or part of the film image			
		(5) No "vertical stripe" was created on all or part of the film image			
		(6) No "serious image distortion" was created on all or part of the film image			
		(7) No "image wear" was created on all or part of the film image			
		(8) No "image anomaly" other than items in (3) to (7) occurred on all or part of the film image			
	Resolution	(9) The "horizontal thin line" of QC pattern appears to be resolved (Use of a magnifying glass)			
		(10) The "vertical thin line" of QC pattern appears to be resolved (Use of a magnifying glass)			
Check from operation panel	Density	(11) After printing the QC pattern, the calibration icon and message are not displayed on the DRYPRO 873 operation panel			
		(12) After printing the QC pattern, "NG" is not displayed in "1" to "4" of the "QC results" in the QC window on the DRYPRO 873 operation panel, but the correct density value (two to three digits) is displayed	1:(   ) 2:(   ) 3:(   ) 4:(   )	1:(   ) 2:(   ) 3:(   ) 4:(   )	
<b>Remarks</b>			<b>Total judgment</b>		

If the first total judgment shows "NG", print the QC pattern again after performing calibration and recheck. If the total judgment is "NG" again on rechecking, contact Konica Minolta technical representatives.

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**KONICA MINOLTA**

**Konica Minolta Healthcare Americas, Inc.**  
411 Newark-Pompton Turnpike, Wayne, NJ 07470,  
U.S.A.  
TEL. 973-633-1500



EU Authorized Representative:  
**Konica Minolta Business Solutions  
Europe GmbH**  
Capellalaan 65, 2132 JL, Hoofddorp,  
The Netherlands  
TEL. +31-20-658-4100

**Konica Minolta Healthcare India Private Ltd.**  
Office No.201, 2nd Floor, Atrium 2,  
Next to Courtyard Marriott Hotel, Andheri Kurla Road,  
Chakala, Andheri (East), Mumbai - 400093, India  
TEL. +91-22-61916900

**Konica Minolta Business Solutions (Canada)  
Ltd.**  
5875 Explorer Drive, Mississauga,  
Ontario, L4W 0E1, Canada  
TEL. 905-890-6600

**Konica Minolta Medical & Graphic (SHANGHAI)  
Co., Ltd.**  
Room 1602, Tower B, Hongwell International Plaza,  
1602 West Zhongshan Road, Xuhui District,  
Shanghai 200235 China  
TEL. 021-6422-2626

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